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Sherwood

OPERATING INSTRUCTIONS

RD-705i

NETWORK AV RECEIVER

IMPORTANT SAFETY INSTRUCTIONS

ENGLISH

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings.
   Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other.
   A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.
    When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

PORTABLE CART WARNING

13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Introduction

READ THIS BEFORE OPERATING YOUR UNIT

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

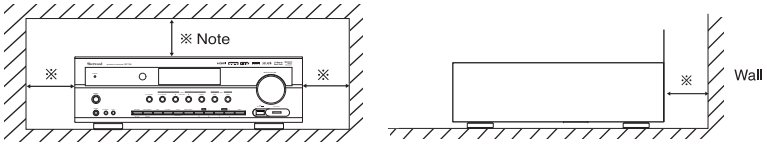
	This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
	This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

ENGLISH

WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

Caution regarding installation

Note : For heat dispersal, do not install this unit in a confined space such as a bookcase or similar enclosure.



Do not block ventilation openings or stack other equipment on the top.

Note to CATV System Installer :
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

FCC INFORMATION
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution : Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada.

FOR YOUR SAFETY

U.S.A **CANADA**	**120 V**

Units shipped to the U.S.A and CANADA are designed for operation on 120 V AC only.
Safety precaution with use of a polarized AC plug.
However, some products may be supplied with a nonpolarized plug.

CAUTION : To prevent electric shock, match wide blade of plug to wide slot, fully insert.

ATTENTION : Pour éviter chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu' au fond.

CAUTION

- Leave a space around the unit for sufficient ventilation.
- Avoid installation in extremely hot or cold locations, or in an area that is exposed to direct sunlight or heating equipment.
- Keep the unit free from moisture, water, and dust.
- Do not let foreign objects in the unit.
- The ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, table-cloths, curtains, etc.
- No naked flame sources, such as lighted candles, should be placed on the unit.
- Please be care the environmental aspects of battery disposal.
- The unit shall not be exposed to dripping or splashing for use.
- No objects filled with liquids, such as vases, shall be placed on the unit.
- Do not let insecticides, benzene, and thinner come in contact with the set.
- Never disassemble or modify the unit in any way.

■Notes on the AC power cord and the wall outlet.

- The unit is not disconnected from the AC power source(mains) as long as it is connected to the wall outlet, even if the unit has been turned off.
- To completely disconnect this product from the mains, disconnect the plug from the wall socket outlet.
- When setting up this product, make sure that the AC outlet you are using is easily accessible.
- Disconnect the plug from the wall outlet when not using the unit for long periods of time.

ENGLISH

CONTENTS

IMPORTANT SAFETY INSTRUCTIONS | **2**

Introduction
- READ THIS BEFORE OPERATING YOUR UNIT | **3**

System Connections | **5**

Front Panel Controls | **13**

Remote Controls | **15**
- REMOTE CONTROL OPERATION RANGE | **16**
- LOADING BATTERIES | **16**

Operations
- LISTENING TO A PROGRAM SOURCE | **17**
- SURROUND SOUND | **19**
- ENJOYING SURROUND SOUND | **21**
- LISTENING TO RADIO BROADCASTS | **26**
- LISTENING TO SIRIUS SATELLITE RADIO | **28**
  (SIRIUS Satellite Radio (only for North America))
- LISTENING TO INTERNET RADIO BROADCASTS, MUSIC FILES | **33**
- RECORDING | **43**
- OTHER FUNCTIONS | **44**
- CONFIRMING THE HDMI FUNCTION | **45**

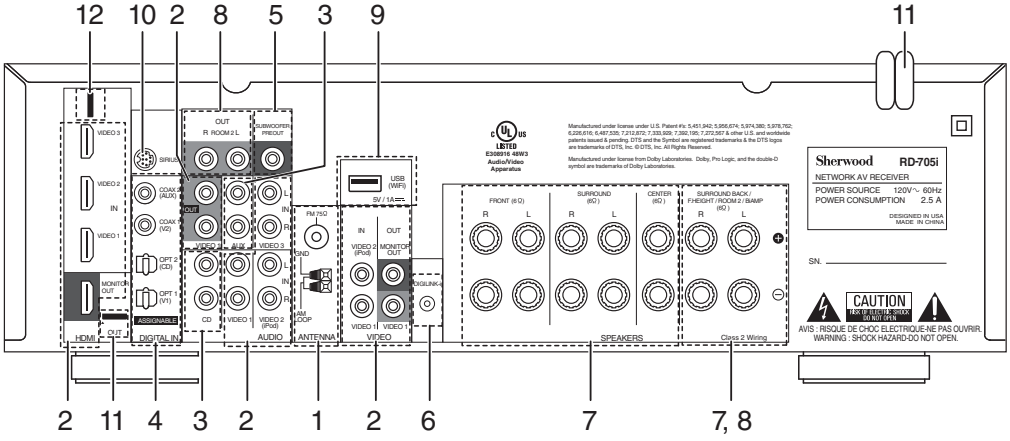
System Setup | **46**
- SETTING THE SYSTEM SETUP | **48**
- SETTING THE INPUT SETUP | **50**
- SETTING THE SPEAKER / ROOM EQ SETUP | **52**
- SETTING THE CH LEVEL SETUP | **58**
- SETTING THE MULTI ROOM SETUP | **60**
- SETTING THE PARAMETER SETUP | **61**
- SETTING THE HDMI SETUP | **63**

Troubleshooting Guide | **65**

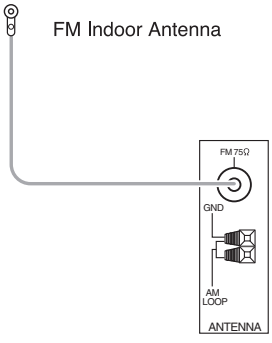
Specifications | **66**

System Connections

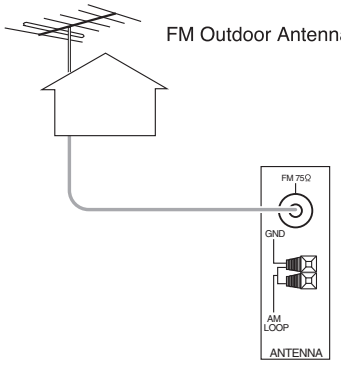
- Please be certain that this unit is unplugged from the AC outlet before making any connections.
- Since different components often have different terminal names, carefully read the operating instructions of the component connected.
- Be sure to observe the color coding when connecting audio, video and speaker cords.
- Make connections firmly and correctly. If not, it can cause loss of sound, noise or damage to the receiver.



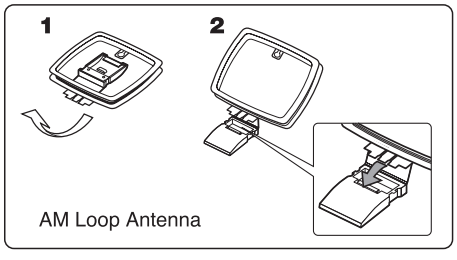
1. CONNECTING ANTENNAS

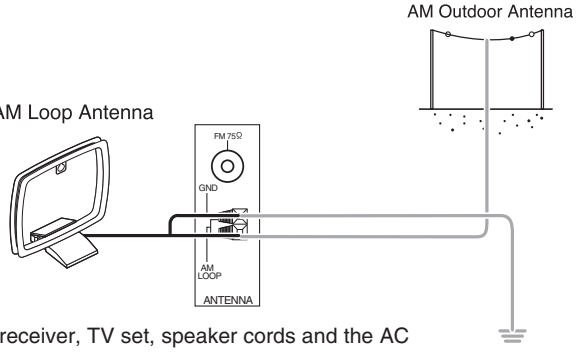


- Change the position of the FM indoor antenna until you get the best reception of your favorite FM stations.



- A 75Ω outdoor FM antenna may be used to further improve the reception. Disconnect the indoor antenna before replacing it with the outdoor one.





- Place the AM loop antenna as far as possible from the receiver, TV set, speaker cords and the AC input cord and set it to a direction for the best reception.
- If the reception is poor with the AM loop antenna, an AM outdoor antenna can be used in place of the AM loop antenna.

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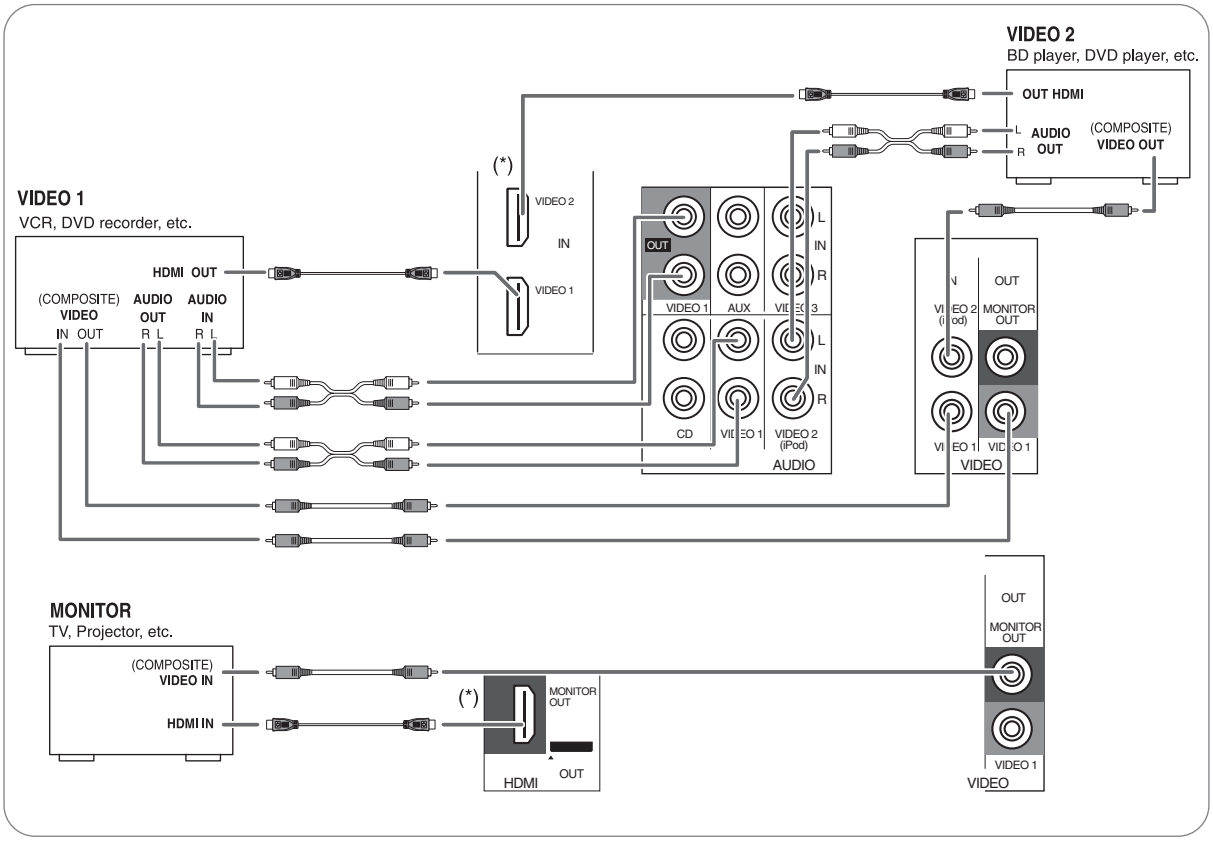
2. CONNECTING VIDEO COMPONENTS

- The jacks of VIDEO 1 may also be connected to a DVD recorder or other digital video recording component. For details, refer to the operating instructions of the component to be connected.
- The jacks of VIDEO 2/VIDEO 3 can also be connected to an additional video component such as a cable TV tuner or satellite system.
- Connect the jacks of VIDEO 3 to the video component in the same way. The VIDEO 3 INs can be connencted to an additional video component without (composite) video connection.
- There are (composite) VIDEO jacks for analog video connections and the HDMI connectors for digital video and audio connections.
- For your reference, the excellence in picture quality is as follows : "HDMI" > "(composite) VIDEO".

■Notes :

- When recording video program sources through the (composite) VIDEO 1 OUT jack or viewing video program sources through the (composite) MONITOR OUT jack, you must connect the (composite) VIDEO IN jack to the video playback components such as BD player, DVD player, etc.
- You can connect Apple iPod to this receiver via Sherwood iPod dock. If Sherwood iPod dock is connected to DIGILINK-i jack for system control, you should connect its video and audio jacks to the “VIDEO 2” jacks of this receiver. Because, when you control your iPod with the unit’s remote control, the VIDEO 2/iPod is automatically selected as an input source and the corresponding operation is performed.



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■HDMI (High Definition Multimedia Interface) connection : (*)

- You can connect the source component (DVD player, etc.) to the display component (TV, projector, etc.) through this receiver with using a commercially available HDMI cord.
- The HDMI connection can carry uncompressed digital video signals and digital audio signals.
- The HDMI video stream signals (video signals) are theoretically compatible with DVI-D. When connecting to a TV monitor, etc., equipped with DVI-D connector, it is possible to connect using a commercially available HDMI-DVI converter cord. Since the HDMI-to-DVI connection cannot carry any audio signals, set the HDMI AUDIO OUT to AMP to hear the HDMI digital audio signals on this receiver.(For details, refer to "When selecting the HDMI AUDIO OUT" on page 63.)

■Copyright protection system

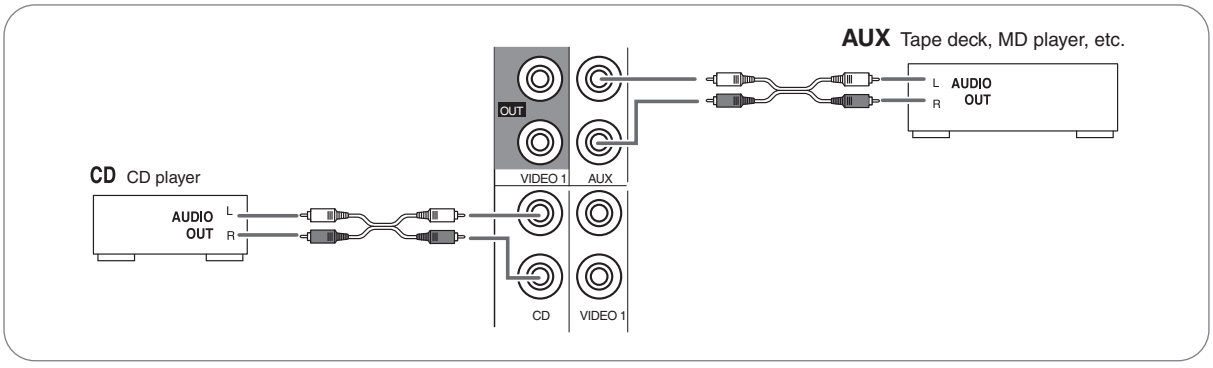
- This unit supports HDCP (High-bandwidth Digital Contents Protection), technology to protect copyright of digital video signals against illegal duplication. HDCP must also be supported on the components connected to this unit.
- HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI licensing LLC.

■Notes :

- For stable signal transfer, we recommend using HDMI cables that are a maximum of 5 meters in length.
- Among the components that support HDMI, some components can control other components via the HDMI connector. For details on the HDMI function, refer to “CONFIRMING THE HDMI FUNCTION” on page 45 and “SETTING THE HDMI SETUP” on page 63.
- The audio signals from the HDMI connector (including the sampling frequency and bit length) may be limited by the component that is connected.
- The video signals will not be output properly if a component incompatible with HDCP is connected.
- If the resolutions of the video signals which are output from the MONITOR OUTs and your monitor TV are not matched, the picture is not clear, natural or displayed. In this case, change the setting of the resolution on the source component (BD player, etc.) to one which the monitor TV can handle. (For details, refer to the operating instructions of the source component.)
- When you want to enjoy only the picture on your TV, not the sound, you should set the HDMI AUDIO OUT to AMP not to output the digital audio signal from the HDMI MONITOR OUT of this receiver. (For details, refer to "When selecting the HDMI AUDIO OUT" on page 63.)

3. CONNECTING AUDIO COMPONENTS

- The AUX INs can be connected to an additional audio component such as a tape deck, an MD player, etc.
- When recording audio signals, connect the AUDIO IN/OUT jacks of “VIDEO 1” to audio recording equipment such as a tape deck, an MD recorder, etc.



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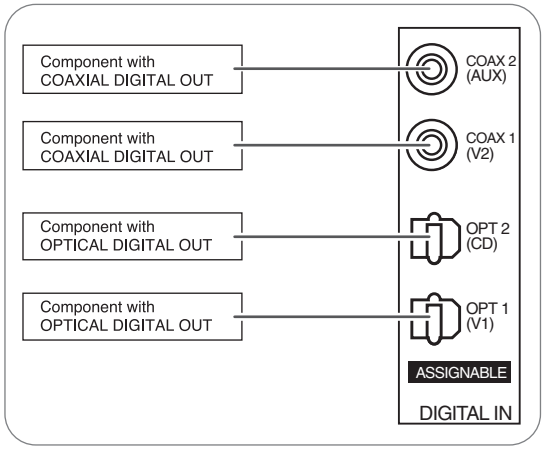
4. CONNECTING DIGITAL INS

- The OPTICAL and the COAXIAL DIGITAL OUTs of the components that are connected to this unit can be connected to these DIGITAL INs.
- A digital input should be connected to the components such as a CD player, DVD player, etc. capable of outputting DTS Digital Surround, Dolby Digital or PCM format digital signals, etc.
- For details, refer to the operating instructions of the component connected.
- When making the COAXIAL DIGITAL connection, be sure to use a 75Ω COAXIAL cord, not a conventional AUDIO cord.
- Some of the commercially available optical fiber cords cannot be used for the equipment. If there is an optical fiber cord which cannot be connected to your equipment, consult your dealer or nearest service organization.



■Note :

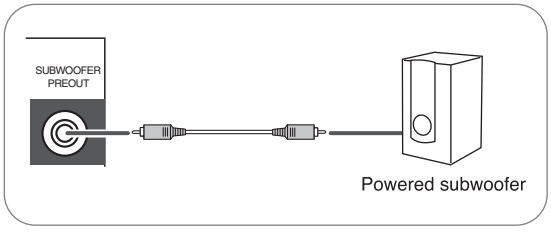
- Be sure to make either a OPTICAL or a COAXIAL DIGITAL connection on each component. (You don't need to do both.)

■Digital input default settings

- If you connect the DIGITAL INs to your components, it is easier to do so following the default settings.
- If your DIGITAL connections are different from default settings, you should assign the DIGITAL INs you used with the "When selecting the DIGITAL IN" procedure on page 51.
- The default settings are as follows :
  OPTICAL IN1 : VIDEO 1, OPTICAL IN2 : CD, COAXIAL IN 1 : VIDEO 2/iPod, COAXIAL IN 2 : AUX

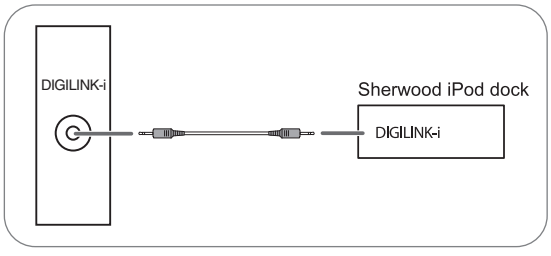
5. CONNECTING SUBWOOFER PREOUT

- To emphasize the deep bass sounds, connect a powered subwoofer.



6. CONNECTING FOR SYSTEM CONTROL

- Connect this jack to the DIGILINK-i jack of Sherwood iPod dock that allows you to control the iPod with the unit's remote control.



7. CONNECTING SPEAKERS

- Be sure to connect speakers firmly and correctly according to the channel(left and right) and the polarity(+ and -). If the connections are faulty, no sound will be heard from the speakers, and if the polarity of the speaker connection is incorrect, the sound will be unnatural and lack bass.
- For installing the speakers, refer to "Speaker placement" on page 10.
- After installing the speakers, first adjust the speaker settings according to your environment and speaker layout.
  (For details, refer to "SETTING THE SPEAKER/ROOM EQ SETUP" on page 52.)

※ The SURROUND BACK channels can be connected to surround back speakers, front height speakers, ROOM 2 speakers or bi-amp capable speakers as follows.

- Depending on how to use the speakers, you should assign the power amplifier correctly. (For details, refer to “When selecting the AMP ASSIGN” on page 48.)

■Surround back speakers
- When using only one surround back speaker, you should connect it to SURROUND BACK LEFT channel.

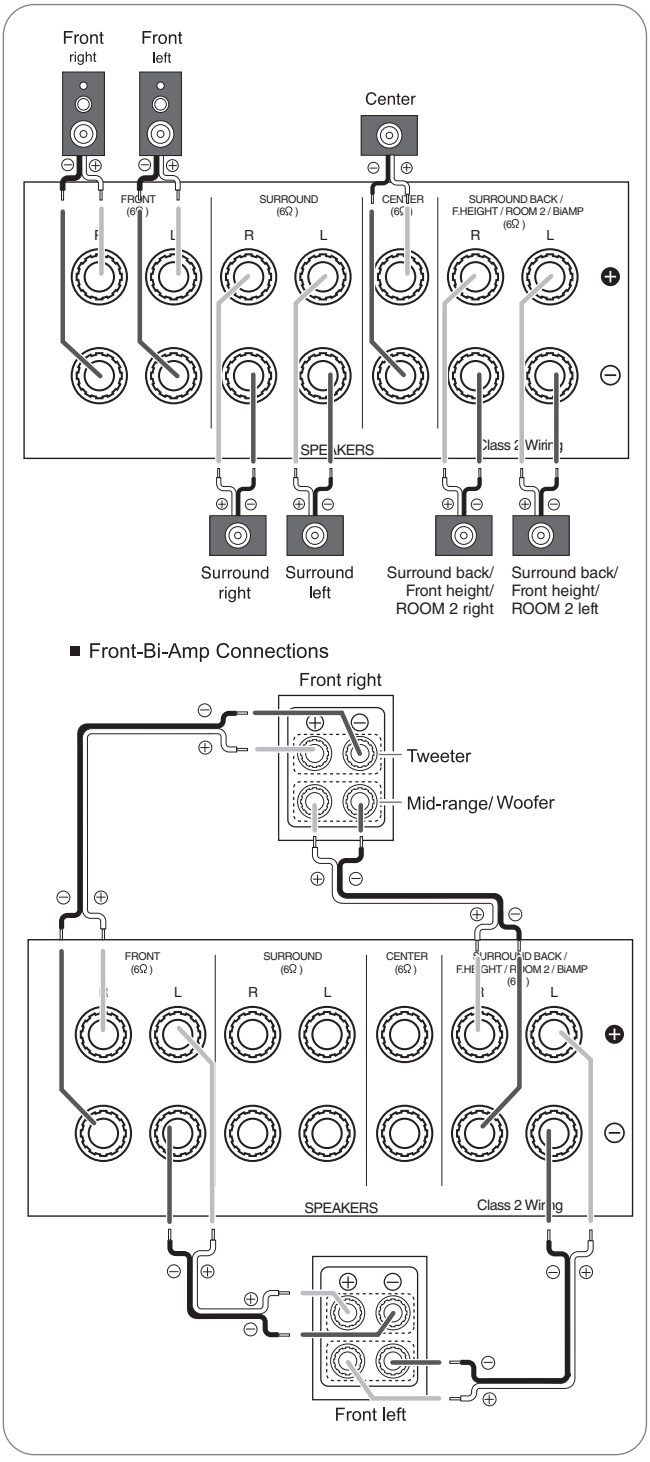
■Front height speakers
- When listening in Dolby Pro Logic IIz mode, connect the front height speakers.

■ROOM 2 speakers
- For ROOM 2 playback, connect the ROOM 2 speakers. (For details, refer to “CONNECTING ROOM 2 OUT JACKS OR ROOM 2 SPEAKER TERMINALS” on page 11.)

■Front Bi-Amp Connections.
- Some speakers are equipped with two sets of input terminals, for bi-amplification.
- Connect the FRONT and the SURROUND BACK channels to the bi-amp-capable speakers. (For details, refer to the operating instructions of your bi-amp-capable speakers.)

■Note :
- Before making bi-amp connections, remove the short-circuiting bars from the terminals of your speakers.

Caution :
- Be sure to use the speakers with the impedance of 6 ohms or above.
- Do not let the bare speaker wires touch each other or any metal part of this unit. This could damage this unit and/or the speakers.
- Never touch the speaker terminals while the AC input cord is connected to the wall AC outlet. Doing so could result in electric shocks.



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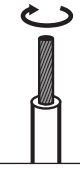
■Connecting speaker wire

1. Strip away approx. 10 mm (3/8 inch) of wire insulation, then twist the wire ends tight.	2. Loosen by turning the speaker terminal counter-clockwise.	3. Insert the bare part of the wire.	4. Tighten by turning it clockwise.
			

Speaker placement

Ideal speaker placement varies depending on the size of your room and the wall coverings, etc. The typical example of speaker placement and recommendations are as follows :

■Front left and right speakers and center speaker
- Place the front speakers with their front surfaces as flush with TV or monitor screen as possible.
- Place the center speaker between the front left and right speakers and no further from the listening position than the front speakers.
- Place each speaker so that sound is aimed at the location of the listener's ears when at the main listening position.

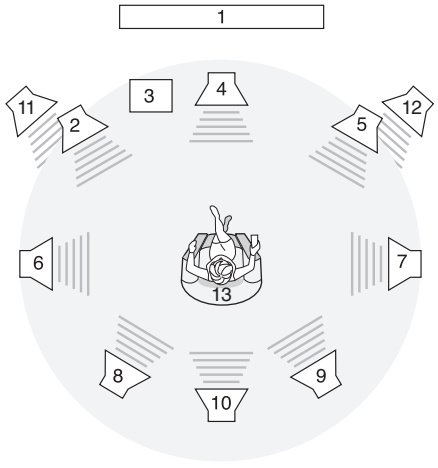
■Surround left and right speakers
- Place the surround speakers approximately 60 to 90 cm (2 to 3 feet) above the ear level of a seated listener on the direct left and right of them or slightly behind.

■Surround back left and right speakers
- Place the surround back speakers at the back facing the front at a narrower distance than front speakers.
- When using a single surround back speaker, place it at the rear center facing the front at a slightly higher position (0 to 20 cm) than the surround speakers.
- We recommend installing the surround back speaker(s) at a slightly downward facing angle. This effectively prevents the surround back channel signals from reflecting off the TV or screen at the front center, resulting in interference and making the sense of movement from the front to the back less sharp.

■Subwoofer
- The subwoofer reproduces powerful deep bass sounds. Place a subwoofer anywhere in the front as desired.

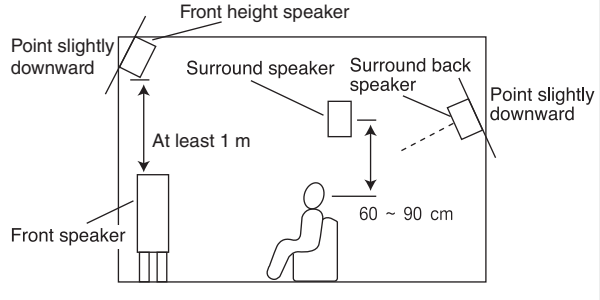
■Front height left and right speakers (Recomended for Dolby Pro Logic IIz playback)
- Place the front height speakers at least 1 meter (3.3 feet) directly above the front speakers.

■Notes :
- When using a conventional TV, to avoid interference with the TV picture, use only magnetically shielded front left and right and center speakers.
- To obtain the best surround effects, the speakers except the subwoofer should be full range speakers.



1. TV or Screen
2. Front left speaker
3. Subwoofer
4. Center speaker
5. Front right speaker
6. Surround left speaker
7. Surround right speaker
8. Surround back left speaker
9. Surround back right speaker
10. Surround center speaker
11. Front height left speaker
12. Front height right speaker
13. Listening position

- 5.1 channel speaker system :
  - front(2,5), center(4), surround(6,7), subwoofer(3)
- 6.1 channel speaker system :
  - 5.1 channel speaker system + surround center(10)
- 7.1 channel speaker system :
  - 5.1 channel speaker system + surround back(8,9)
- 7.1 channel speaker system(for Dolby Pro Logic IIz playback) :
  - 5.1 channel speaker system + front height(11,12)

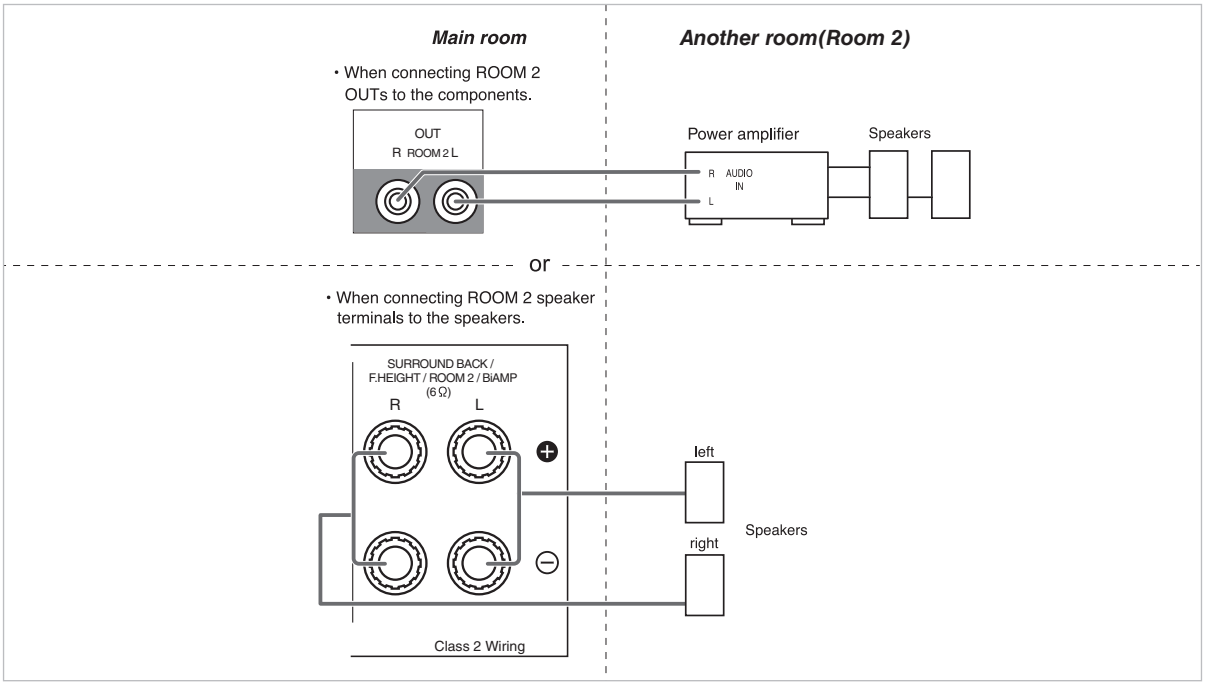


8. CONNECTING ROOM 2 OUT JACKS OR ROOM 2 SPEAKER TERMINALS

- ROOM 2 playback feature allows you to play a different program source in another room as well as one source in the main room at the same time.
- For ROOM 2 playback, connect the ROOM 2 OUT jacks to the amplifier installed in another room, or connect the ROOM 2 speaker terminals to the speakers.
- To drive the speakers connected to the ROOM 2 speaker terminals, you should assign the power amplifier to “ROOM 2”. (For details, refer to “When selecting the AMP ASSIGN” on page 48.)

■Note :

- To minimize hum or noise, use high quality connection cords.

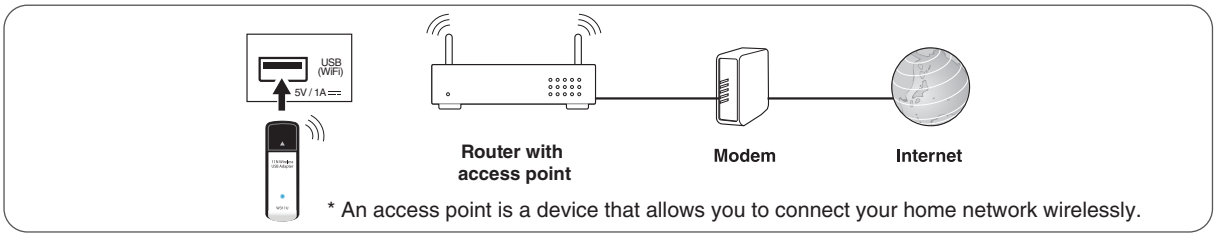


9. CONNECTING TO NETWORK

- To connect this unit to a broadband home network wirelessly to listen to internet radio broadcast, connect the supplied 11N Wireless USB adapter to the USB connector either on the rear panel or on the front panel.
- This unit is equipped with an IEEE802.11n(2.4 GHz band only) wireless module, which also supports the 802.11 b/g standards.

■Notes :

- For safe opertaion, turn the power off before connecting or disconnecting the supplied 11N Wireless USB adapter.
- After making a broadband internet connection, you should set the communication settings. (For details, see “When selecting “Network”” on page 41.)
- When using a broadband internet connection, a contract with an internet service provider is required. For more information, contact your nearest internet service provider.
- Refer to the operating instructions of the equipment because the connected equipment and connection method may differ depending on your internet environment.



* An access point is a device that allows you to connect your home network wirelessly.

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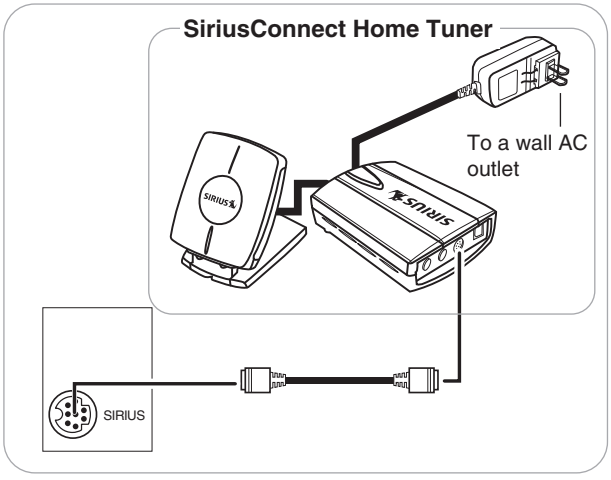
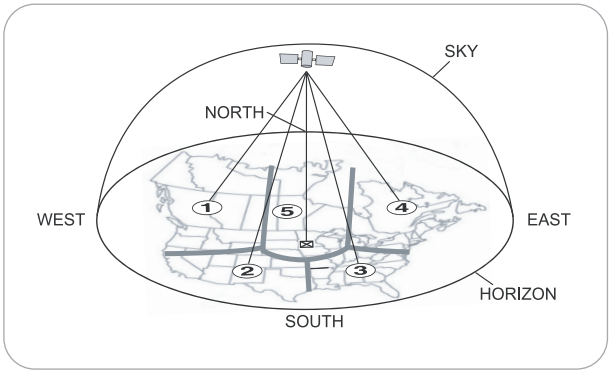
10. CONNECTING SIRIUS CONNECTOR (only for North America)

- Connect the SIRIUS connector to the Sirius Connect Home Tuner kit (sold separately).
- Position the Home Tuner antenna near a south-facing window to receive the best signal.
  When making connections, also refer to the operating instructions of the SiriusConnect Home Tuner.
- To listen to SIRIUS Satellite Radio, refer to "SIRIUS Satellite Radio (only for North America)" on page 28.



■Positioning the antenna

- For a consistent satellite signal, the antenna must be positioned correctly. Use the following map to determine which area you are in and position the antenna accordingly.
- **Area 1** : Point the antenna toward the sky in the ***east***, ***notrtheast***, or ***southeast***, either through a window or outside.
- **Area 2** : Point the antenna toward the sky in the ***north*** or ***northeast***, either through a window or outside.
- **Area 3** : Point the antenna toward the sky in the ***north*** or ***northwest***, either through a window or outside.
- **Area 4** : Point the antenna toward the sky in the ***west***, ***northwest***, or ***southwest***, either through a window or outside.
- **Area 5** : Put the antenna outside and point it ***straight up***. The antenna cannot be used indoors.



11. AC INPUT CORD

- Plug the cord into a wall AC outlet.

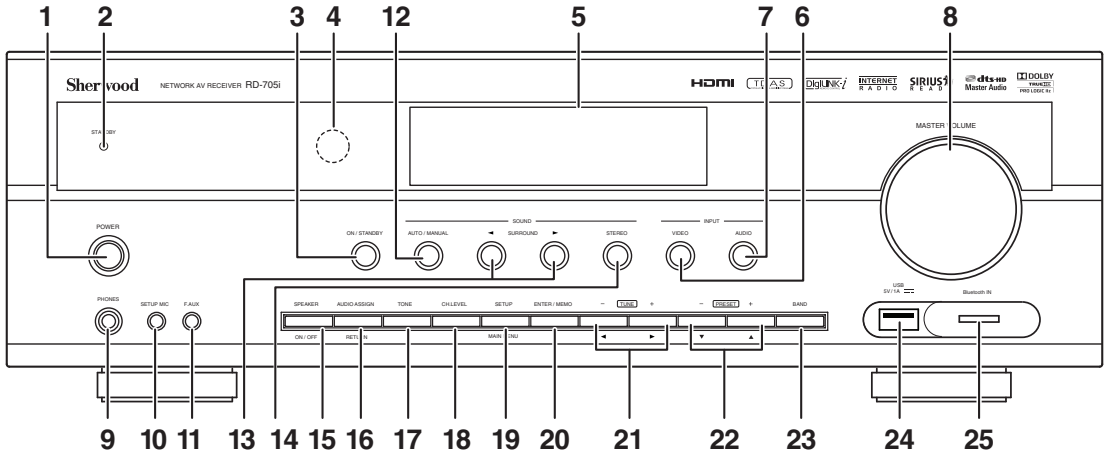
12. TERMINALS FOR UPGRADES

- These terminals may be used in the future to update the operating software so that it will be able to support new digital audio formats, etc.

■Note :

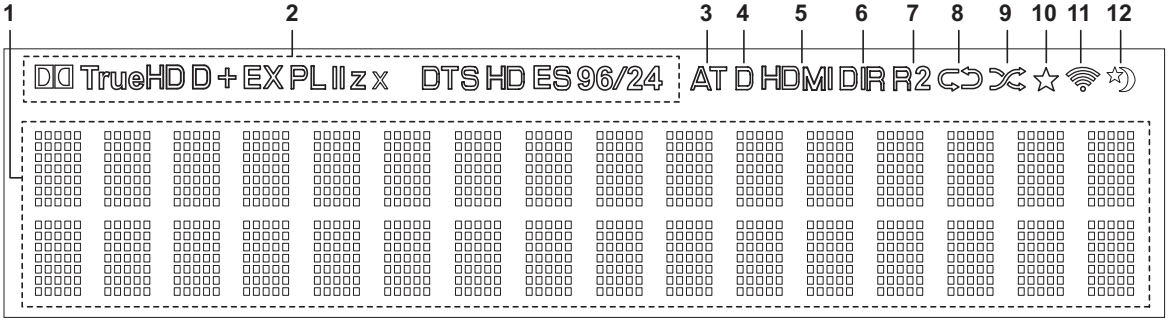
- Programming for upgrades requires specialized programming knowledge and for that reason we recommend that it only be done by qualified installers.

Front Panel Controls



1. POWER switch
2. STANDBY indicator
3. POWER ON/STANDBY button
4. REMOTE SENSOR
5. FLUORESCENT DISPLAY
   For details, see below.
6. VIDEO INPUT SELECTOR button
7. AUDIO INPUT SELECTOR button
8. MASTER VOLUME knob
9. HEADPHONE jack
10. SETUP MIC jack
    For details, see next page.
11. FRONT AUX IN jack
    For details, see next page.
12. AUTO/MANUAL button
13. SURROUND MODE UP/DOWN(▶/◀) buttons
14. STEREO button
15. SPEAKER button
16. AUDIO ASSIGN button
17. TONE MODE button
18. CHANNEL LEVEL button
19. SETUP button
20. ENTER/MEMORY button
21. TUNING UP/DOWN(+/-),
    CURSOR LEFT/RIGHT(◀/▶) buttons
22. PRESET UP/DOWN(+/-),
    CURSOR UP/DOWN(▲/▼) buttons
23. BAND button
24. USB connector
    For details, see next page.
25. Bluetooth IN connector
    For details, see next page.

■FLUORESCENT DISPLAY



1. Input, frequency, volume level, surround mode, operating information, etc.
2. Surround mode indicators
3. AUTO indicator
4. DIGITAL INPUT indicator
5. HDMI indicator
6. DIRECT indicator
7. ROOM 2 indicator
8. REPEAT indicator
9. SHUFFLE indicator
10. FAVORITE indicator
11. SIGNAL STRENGTH OF INTENET RADIO indicator
12. SLEEP indicator

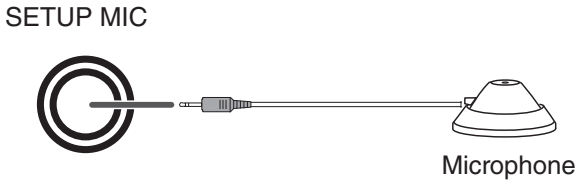
■SETUP MIC JACK

• To use Auto Setup function, connect the supplied microphone to the SETUP MIC jack.(For details, refer to "When selecting the AUTO SETUP" on page 52.)

■Notes:

• Because the microphone for Auto Setup is designed for use with this receiver, do not use a microphone other than the one supplied with this receiver.

• After you have completed the auto setup procedure, disconnect the microphone.

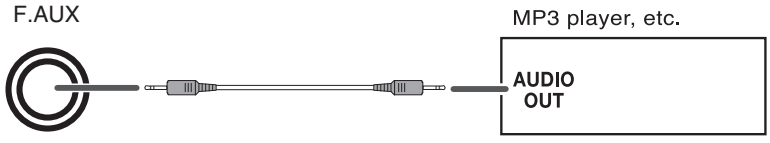


■FRONT AUX IN JACK

• The FRONT AUX IN jack can be connected to additional audio components such as an MP3 player, etc.

■ Note :

• When connecting this jack to an MP3 player, etc., you should use the stereo mini cord, not a mono mini cord.

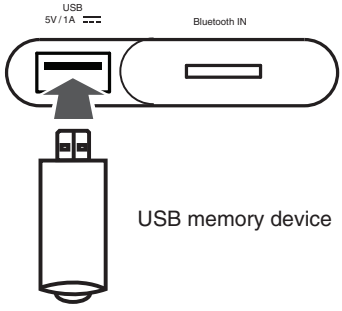


■USB CONNETOR

• An USB memory device can be connected to the USB connector either on the front panel or on the rear panel to listen to MP3 or WMA files stored on it through this unit. (For details, refer to “When selecting “music library”” on page 37.)

■ Note :

• After USB playback, remove the USB memory device in the stop mode or the standby mode.



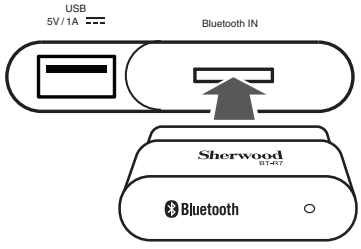
■Bluetooth IN CONNECTOR

• If the **Bluetooth IN** connector is connected to Sherwood Audio Receiver BT-R7(sold separately) with *Bluetooth* wireless technology, you can enjoy music wirelessly with a music player featuring *Bluetooth* wireless technology such as MP3 player, mobile phone, etc..
(For information on Sherwood Audio Receiver BT-R7, contact your dealer.)

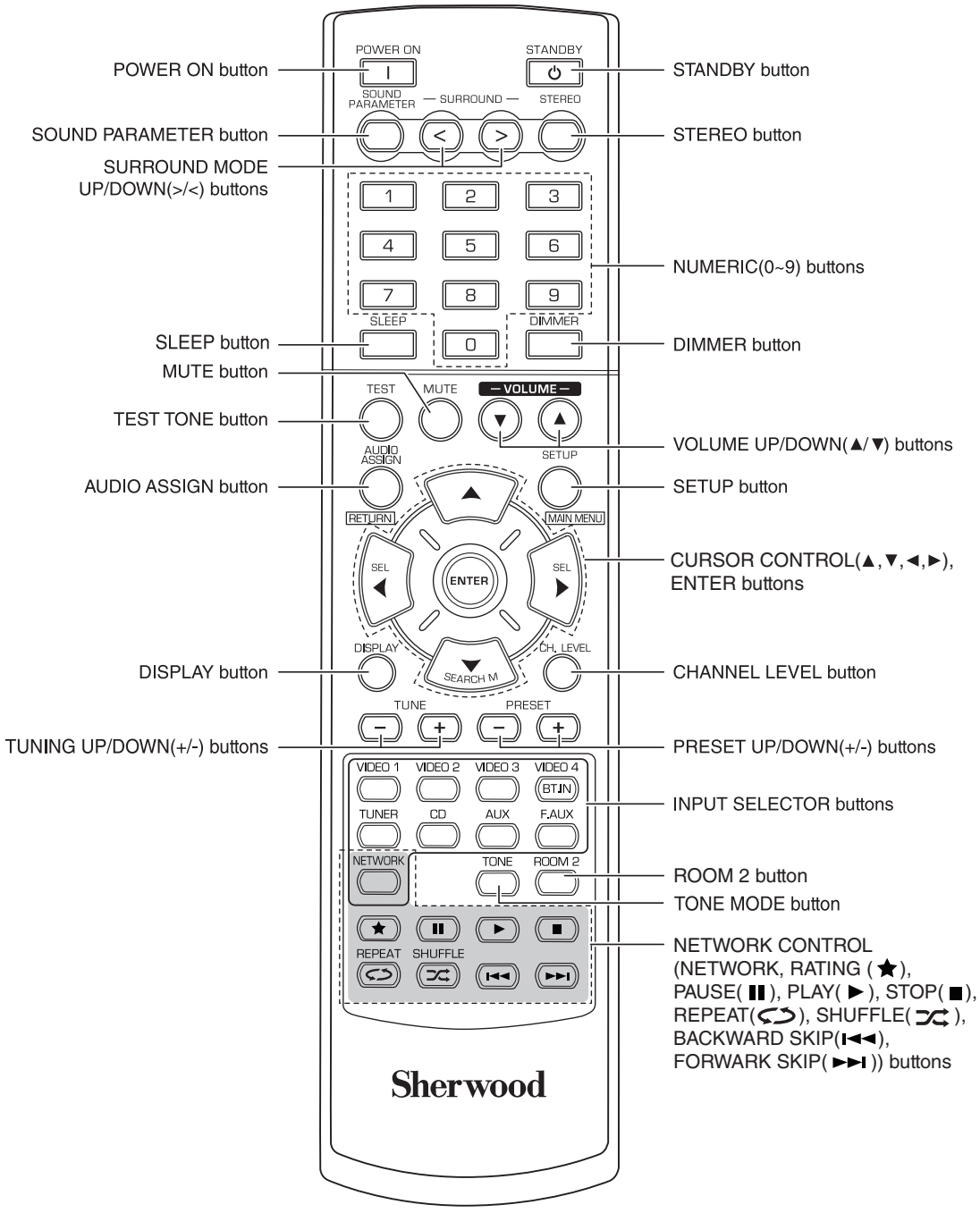
• The *Bluetooth* word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Sherwood Corporation is under license. Other trademarks and trade names are those of their respective owners.

■ Note:

• For safe operation, turn the power off before connecting or disconnecting the Audio Receiver BT-R7.

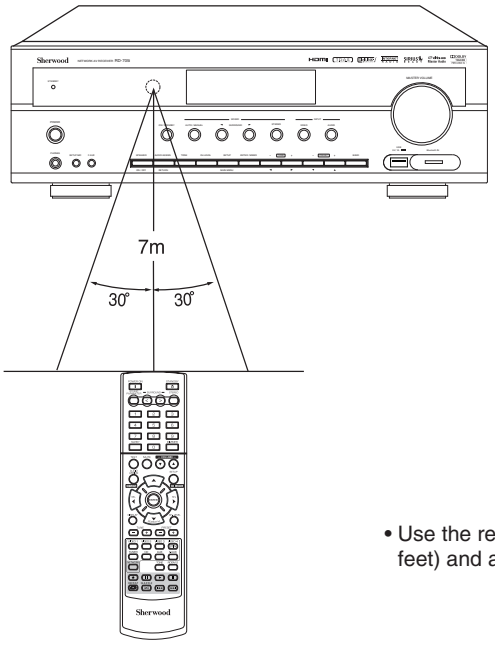


Remote Controls



ENGLISH

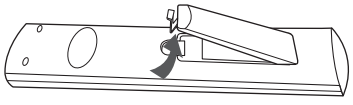
REMOTE CONTROL OPERATION RANGE



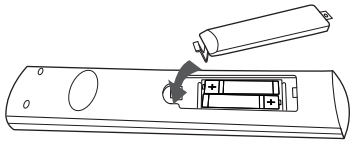
• Use the remote control unit within a range of about 7 meters (23 feet) and angles of up to 30 degrees aiming at the remote sensor.

LOADING BATTERIES

1. Remove the cover.



2. Load two batteries ("AAA" size, 1.5 V) matching the polarity.



• Remove the batteries when they are not used for a long time.
• Do not use the rechargeable batteries (Ni-Cd type).

Operations

■**Note :** Before operating this receiver, first set this unit as desired for optimum performance, doing the system setup procedures. (For details, refer to "System Setup" on page 46.)

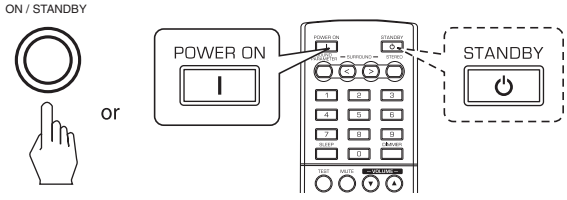
LISTENING TO A PROGRAM SOURCE

Before operation

• Enter the standby mode.

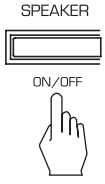
• The STANDBY indicator lights up. This means that the receiver is not disconnected from the AC mains and a small amount of current is retained to support the operation readiness.
• To switch the power off, push the POWER switch again.
• Then the power is cut off and the STANDBY indicator goes off.

1. In the standby mode, turn the power on.



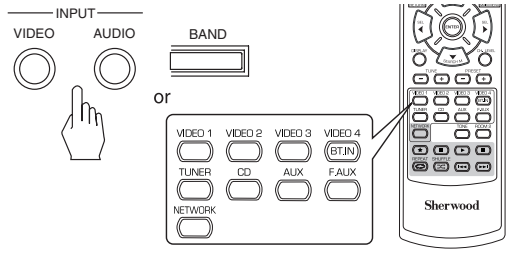
• Each time the POWER ON/STANDBY button on the front panel is pressed, the receiver is turned on to enter the operating mode or off to enter the standby mode.
• On the remote control, press the POWER ON button to enter the operating mode or press the STANDBY button to enter the standby mode.

2. Switch the speakers on.



• Then “SPEAKER ON” is displayed and the sound can be heard from the speakers connected to the speaker terminals.
• When using the headphones for private listening, press the SPEAKER button again to switch the speakers off(“SPEAKER OFF” is displayed).

3. Select the desired input source.



• Each time the “VIDEO” button on the front panel is pressed, the input source changes as follows:
→ VIDEO 1 → V2/iPOD → VIDEO 3 ┐

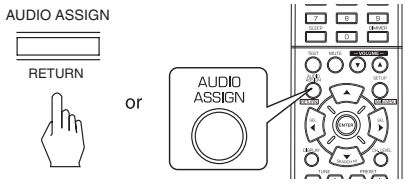
• Each time the “AUDIO” button on the front panel is pressed, the input source changes as follows:
→CD→AUX→TV*→F.AUX→BT→NET/USB→Tuner ┐
(Frequency display)

* : Only when the HDMI CONTROL is set to ON, you can hear the digital audio signals from TV via a HDMI cable. (For details, refer to “When selecting the HDMI CONTROL” on page 63.)
• When selecting NET/USB, refer to “LISTENING TO INTERNET RADIO BROADCASTS, MUSIC FILES” on page 33.
• Each time the BAND button(or the TUNER button on the remote control) is pressed, the band changes as follows:
→ FM STEREO → FM MONO → AM → SIRIUS ┐

When an input source other than TV, NET/USB, tuner is selected

• To hear the sound from the selected digital input, you should set the AUDIO MODE correctly on the INPUT SETUP menu. (For details, refer to “SETTING THE INPUT SETUP” on page 50.)

4. Select the digital or the analog input connected as desired.



• Each time this button is pressed, the corresponding input is selected as follows:
→ OPTI.1 → OPTI.2 → COAX.1 → COAX.2 → ANALOG ┐

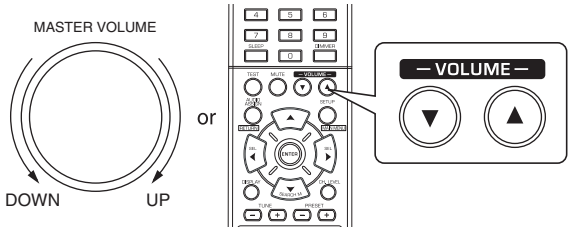
■**Notes :**
• When VIDEO 1 ~ 3 is selected and the corresponding HDMI IN is connected, the digital input cannot be selected depending on the AUDIO MODE setting (“AUTO”, “HDMI”).
• When TV, NET/USB or tuner is selected as an input source, the digital input cannot be selected.
• The selected digital input or analog input is automatically assigned to the corresponding input source on the INPUT setup menu. (For details, refer to “SETTING THE INPUT SETUP” on page 50.)
• The sound from the component connected to the selected digital input can be heard regardless of the selected input source.
• When the selected digital input is not connected, this unit operates as follows depending on the AUDIO MODE setting.
* If the AUDIO MODE is set to “AUTO”, the “D” or “HDMI” flickers and the analog input is automatically selected.
* If it is set to “DIGITAL” or “HDMI”, “OPTI.1”, etc or “HDMI1”, etc flickers, meaning no sound is heard.

ENGLISH

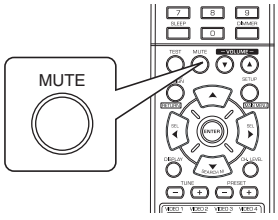
5. Operate the selected component for playback.

• When playing back the program sources with surround sound, refer to “ENJOYING SURROUND SOUND” on page 21.

6. Adjust the (overall) volume.

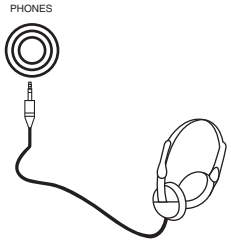


7. To mute the sound.



• “MUTING” is displayed.
• To resume the previous sound level, press it again.

8. To listen with the headphones.

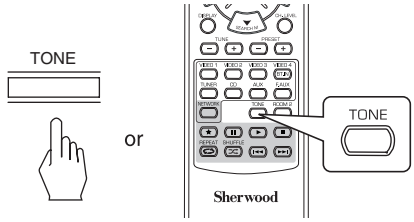


• Be sure to switch the speakers off.
• When listening to a DTS or Dolby Digital program source, if the headphones are plugged in and the SPEAKER button is set to off, it enters the 2CH downmix mode automatically. (For details, refer to “2CH downmix mode”on page 22.)

■Note:
• Be careful not to set the volume too high when using headphones.

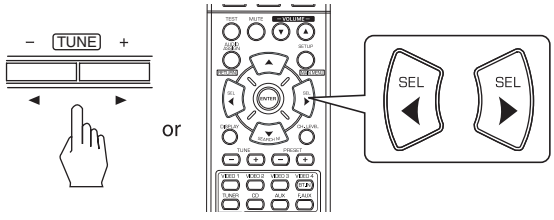
Adjusting the tone (bass and treble)

9. Enter the tone mode.



• The tone mode is displayed for several seconds.

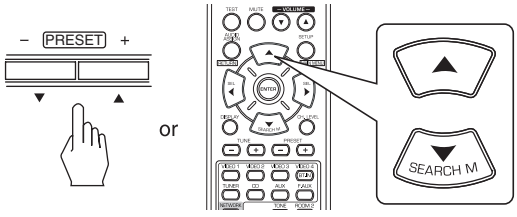
10. Press the CURSOR LEFT(◀)/RIGHT(▶) buttons to select the desired tone mode.



• Each time these buttons are pressed, the tone mode is selected as follows :
OFF : To listen to a program source without the ↕ tone effect.("DIR" lights up.)
ON : To adjust the tone for your taste.("DIR" goes off.)

■When the TONE is set to ON to adjust the tone (bass and treble).

11. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired tone.



• Each time these buttons are pressed, the tone is selected as follows:
→ BASS ↔ TREBLE ↔ TONE: ON ←

12. Press the CURSOR LEFT(◀)/RIGHT(▶) buttons to adjust the selected tone as desired.

• The tone level can be adjusted within the range of -10 ~ +10 dB.
• In general, we recommend the bass and treble to be adjusted to 0 dB (flat level).
• Extreme settings at high volume may damage your speakers.
• If the tone display disappears, start from the step 9 again.

SURROUND SOUND

• This receiver incorporates a sophisticated Digital Signal Processor that allows you to create optimum sound quality and sound atmosphere in your personal Home Theater.

Surround modes

■DTS Digital Surround
DTS Digital Surround(also called simply DTS) supports up to 5.1 discrete channels and uses less compression for high fidelity reproduction. Use it with DVDs and CDs bearing the DTS logo.

■DTS-ES™ Discrete 6.1
This is a 6.1 channel discrete digital audio format adding a surround back channel to the DTS digital surround sound. The seven totally separate audio channels provide better spatial imaging and 360 degrees sound localization, perfect for sounds that pan across the surround channels. Use it with DVDs bearing the DTS-ES logo, especially those with a DTS-ES Discrete sound track.

■DTS - ES™ Matrix 6.1
This is a 6.1 channel discrete digital audio format inserting a surround back channel to the DTS digital surround sound through matrix encoding. Use it with DVDs bearing the DTS-ES logo.

■DTS Neo : 6™ surround
DTS Neo : 6 is a matrix decoding technology for achieving 7.1 channel surround playback with 2 channel sources. It includes "DTS Neo : 6 Cinema" suited for playing movies and "DTS Neo : 6 Music" suited for playing music.

■DTS 96/24
This is high resolution DTS with a 96 kHz sampling rate and 24 bit resolution, providing superior fidelity. Use it with DVDs bearing the DTS 96/24 logo.

■DTS-HD High Resolution Audio
Developed for use with HDTV, including the new video disc formats Blu-ray and HD DVD, this is the latest multi-channel audio format from DTS. It supports up to 7.1 channels with 96 kHz/24 bit sampling rate and signal resolution.

■DTS-HD Master Audio
Designed to take full advantage of the additional storage space offered by the new Blu-ray and HD DVD disc formats, this new DTS format offers up to 7.1 discrete channels of uncompressed digital audio with 96 kHz/24 bit sampling rate and signal resolution.

Manufactured under license under U.S. Patent #'s: 5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,226,616; 6,487,535; 7,212,872; 7,333,929; 7,392,195; 7,272,567 & other U.S. and worldwide patents issued & pending.
DTS is a registered trademark and the DTS logos, Symbol, DTS-HD and DTS-HD Master Audio are trademarks of DTS, Inc.
ⓒ 1996-2008 DTS, Inc. All Rights Reserved.

■Dolby Digital
Dolby Digital is the multi-channel digital signal format developed by Dolby Laboratories. Discs bearing the Dolby Digital logo includes the recording of up to 5.1 channels of digital signals. This will put you right in the middle of the action, just like being in a movie theater or concert hall.

■Dolby Digital EX
This mode expands 5.1-channel sources for 6.1/7.1 channel playback. It's especially suited to Dolby Digital EX soundtracks that include a matrix-encoded surround back channel. The additional channel adds an extra dimension and provides an enveloping surround sound experience, perfect for rotating and fly-by sound effects.

■Dolby Digital Plus
Developed for use with HDTV, including the new video disc formats Blu-ray and HD DVD, this is the latest multichannel audio format from Dolby. It supports up to 7.1 channels with 48 kHz/24-bit sampling rate and signal resolution.

■Dolby TrueHD
Designed to take full advantage of the additional storage space offered by the new Blu-ray and HD DVD disc formats, this new Dolby format offers up to 7.1 discrete channels of lossless audio performance with 96 kHz/24 bit sampling rate and signal resolution.

■Dolby Pro Logic IIz
This mode adds front height channels to surround sound, creating a 7.1 channel palyback for music, movies and video games. Dolby Pro Logic IIz brings enhanced spatial effects, added depth, and an overall airiness to listening experience.

■Dolby Pro Logic IIx
This mode expands any 2-channel source for 7.1-channel playback. It provides a very natural and seamless surround sound experience that fully envelopes the listener. As well as music and movies,video games can also benefit from the dramatic spatial effects and vivid imaging. It includes "Dolby Pro Logic IIx Movie" suited for playing movies, "Dolby Pro Logic IIx Music" suited for playing music and "Dolby Pro Logic IIx Game" suited for playing games.

■Dolby Pro Logic II
If you are not using any surround back speakers, Dolby Pro Logic II surround will be used instead of Dolby Pro Logic IIx surround. It incudes Dolby Pro Logic II Movie, Dolby Pro Logic II Music and Dolby Pro Logic II Game like Dolby Pro Logic IIx surround.

■Dolby Pro Logic
Dolby Pro Logic is a specially encoded two channel surround format which consists of four channels (front left, center, front right and surround). Sources bearing the " DOLBY SURROUND " provide the theater-like surround sound. The surround channel is monaural, but is played through both surround speakers.

Manufactured under license from Dolby Laboratories.
Dolby, Pro Logic, and the double-D symbol are registered trademarks of Dolby Laboratories.

ENGLISH

• The following modes apply conventional 2-channel signals such as digital PCM or analog stereo signals to high performance Digital Signal Processor to recreate sound fields artificially. Select one of the 11 provided surround modes according to the program source you want to play.

■Theater
This mode provides the effect of being in a theater when watching a play.

■Movie
This mode provides the effect of being in a movie theater when watching a movie.

■Hall
This mode provides the ambience of a concert hall for classical music sources such as orchestral, chamber music or an instrumental solo.

■Game
This mode is suitable for video games.

■Stadium
This mode provides the expansive sound field to achieve the true stadium effect when watching baseball or soccer games.

■Classic
This mode provides the acoustic effects of a large concert hall for classical music.

■Rock
This mode provides the ambience of a live concert for rock or pop music.

■Acoustic
This mode suitable for acoustic music sources.

■Auto Volume Level Control
This mode automatically equalizes playback sound levels if each sound level varies with the music source recorded in a portable audio player.

■Virtual
This mode creates a virtual surround sound field through two front speakers.

■Multi CH Stereo
This mode is designed for playing background music. The front, surround and surround back channels create a stereo image that encompasses the entire area.

For your reference, the sound from each channel can be reproduced according to the surround modes as follows:

Modes / Channels	FRONT L/R	CENTER	SURROUND L/R	SURROUND BACK/ FRONT HEIGHT L/R	SUBWOOFER
DTS-HD HIGH RESOLUTION AUDIO/MASTER AUDIO	O	O	O	O/—	O
DTS, DTS 96/24	O	O	O	—	O
DTS ES DISCRETE/MATRIX	O	O	O	O	O
DTS NEO: 6 CINEMA/MUSIC	O	O	O	O	—(*)
DOLBY DIGITAL PLUS / DOLBY TRUEHD	O	O	O	O/—	O
DOLBY DIGITAL	O	O	O	—	O
DOLBY DIGITAL EX	O	O	O	O	O
DOLBY PRO LOGIC IIz	O	O	O	O	O
DOLBY PRO LOGIC IIx MOVIE/MUSIC/GAME	O	O	O	O	O
DOLBY PRO LOGIC II MOVIE/MUSIC/GAME	O	O	O	—	O
(MULTI) PCM	O	O	O	O/—	O
AUTO VOLUME LEVEL CONTROL/VIRTUAL	O	—	—	—	—(*)
DOLBY PRO LOGIC	O	O	O	—	—(*)
Other Surrounds	O	O	O	O	—(*)
STEREO	O	—	—	—	—(*)

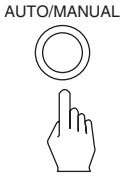
(*): Depending on the subwoofer setting, the sound from the subwoofer channel may be reproduced.

• Depending on the speaker settings and the number of the encoded channels, etc., the sound from the corresponding channels cannot be reproduced.(For details, refer to "SETTING THE SPEAKER / ROOM EQ SETUP" on page 52.)

ENJOYING SURROUND SOUND

■**Note**: Before surround playback, first perform the speaker setup procedure, etc. on the SETUP menu for optimum performance. (For details, refer to "SETTING THE SPEAKER / ROOM EQ SETUP" on page 52.)

Depending on how to select a surround mode, select the auto surround mode or the manual surround mode.



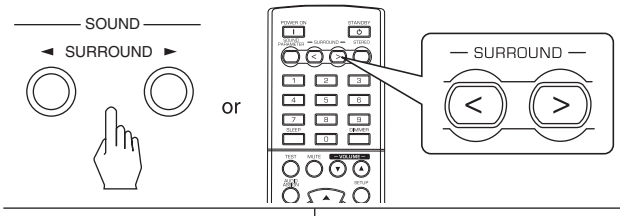
• Each time this button is pressed, the mode changes as follows :
Auto surround mode : The optimum surround mode will be automatically selected depending on the signal format being input.
("AT" lights up.)

Manual surround mode : You can select the desired of different surround modes selectable for the signal being input with using the SURROUND MODE UP/DOWN (>/<) buttons.
("AT" goes off.)

■**Notes :**
- Even when the auto surround mode is selected and the same type of digital signal format is being input, the optimum surround mode may vary depending on whether the speaker type is set to "NO" or not.
- When the auto surround mode is selected, the surround modes other than the optimum surround mode cannot be selected.

■**When selecting the manual surround mode with pressing the AUTO/MANUAL button on the front panel**

Select the desired surround mode.



• Each time the SURROUND MODE UP/ DOWN (>/<) buttons are pressed, the surround mode changes depending on the input signal format as follows :

Signal format being input	Selectable surround mode	
	"SURR B" : "L2", "S2", "L1", "S1"	"SURR B"/"F.HEIGHT" "NO" or "F.HEIGHT":"LARGE"/"SMALL"
Dolby Digital Plus 5.1 ch*1	(DOLBY D+ +PLIIx MOVIE), DOLBY DIGITAL +, DOLBY D++ EX, DOLBY D+ +PLIIx MUSIC, DSP Surround modes*2	DOLBY DIGITAL+, [DOLBY D++PLIIz HEIGHT]
Dolby Digital Plus 7.1 ch	DOLBY DIGITAL+	
Dolby TrueHD 5.1 ch*1	(DOLBY HD+PLIIx MOVIE), DOLBY TrueHD, DOLBY HD+ EX, DOLBY HD+ PLIIx MUSIC, DSP Surround modes*2	DOLBY TrueHD, [DOLBY HD+PLIIz HEIGHT]
Dolby TrueHD 7.1 ch	DOLBY TrueHD	
Dolby Digital 5.1 ch, Dolby Digital EX 6.1 ch	(DOLBY D+PLIIx MOVIE), DOLBY DIGITAL, DOLBY DIGITAL EX, DOLBY D+PLIIx MUSIC, DSP Surround Modes*2	DOLBY DIGITAL, [DOLBY D+PLIIz HEIGHT]
DTS-HD Master Audio 5.1 ch*1, DTS-HD High Resolution Audio 5.1 ch*1	(DTS-HD+PLIIx MOVIE), DTS-HD MASTER or DTS-HD HI RES, DTS-HD+NEO:6, DTS-HD+PLIIx MUSIC, DSP Surround modes*2	DTS-HD MASTER or DTS-HD HI RES, [DTS-HD+ PLIIz HEIGHT]
DTS-HD Master Audio 7.1 ch, DTS-HD High Resolution Audio 7.1 ch	DTS-HD MASTER or DTS-HD HI RES	
DTS ES Discrete 6.1 ch	(DTS+PLIIx MOVIE), DTS ES DISCRETE, DTS+PLIIx MUSIC	DTS, [DTS+PLIIz HEIGHT]
DTS ES Matrix 6.1 ch	(DTS+PLIIx MOVIE), DTS, DTS ES MATRIX, DTS+PLIIx MUSIC, DSP Surround modes*2	
DTS 5.1 ch, DTS 96/24 5.1 ch	(DTS+PLIIx MOVIE), DTS or DTS 96/24, DTS+NEO:6, DTS+PLIIx MUSIC, DSP Surround modes*2	DTS or DTS 96/24, [DTS+PLIIz HEIGHT]
PCM 7.1 ch	PCM	PCM, [PCM+PLIIz HEIGHT]
PCM 5.1 ch*1	(PCM+PLIIx MOVIE), PCM, PCM+EX, PCM+PLIIx MUSIC, DSP Surround modes*2	
Dolby Digital 2 ch, PCM 2 ch , Analog 2 ch	DOLBY PRO LOGIC, DOLBY PLIIx MOVIE, DOLBY PLIIx MUSIC, DOLBY PLIIx GAME, NEO:6 CINEMA, NEO:6 MUSIC, DSP Surround modes*2	DOLBY PRO LOGIC, DOLBY PLII MOVIE, DOLBY PLII MUSIC, DOLBY PLII GAME, NEO:6 CINEMA, NEO:6 MUSIC, DSP Surround modes*2, <DOLBY DIGITAL>, [DOLBY PLIIz HEIGHT]

- Depending on surround back speaker setting("SURR B") or front height speaker setting("F.HEIGHT"), some surround modes can be selected or not as follows :

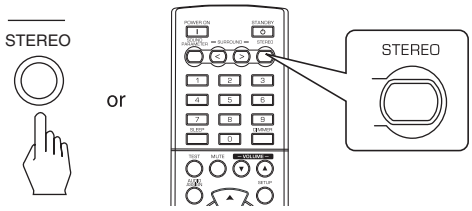
( ) : Possible only when "SURR B" is set to 2 channel("L2", "S2"). (Refer to "When selecting the SPEAKER CONFIGURATION" on page 55.)
[ ] : Possible only when "F.HEIGHT" is set to "LARGE" or "SMALL".
< > : Possible only when "SURR B" or "F.HEIGHT" is set to "NO" and the digital signals from Dolby Digital 2ch source are played.
*1 : When these sources are recorded at 192 kHz, only the corresponding mode(DOLBY DIGITAL+, DOLBY TrueHD, DTS-HD MASTER or DTS-HD HI RES, PCM) can be selected.
*2 : Stand for THEATER, MOVIE, HALL, GAME, STADIUM, CLASSIC, ROCK, ACOUSTIC, AUTO VOLUME LEVEL CONTROL, VIRTUAL, MULTI CH STEREO.

ENGLISH

ENGLISH

Continued

■To cancel the surround mode for stereo operation



- Depending on the signal format which is being input, either the stereo mode or the 2CH downmix mode is selected.
- To cancel either the stereo mode or the 2CH downmix mode, select the surround mode with using the SURROUND MODE UP/ DOWN (>/<) buttons.

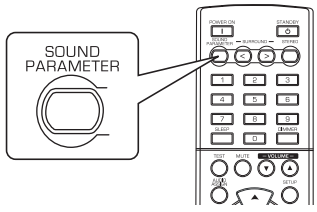
■2CH downmix mode

- This mode allows the multi-channel signals encoded in DTS or Dolby Digital format to be mixed down into 2 front channels and to be reproduced through only two front speakers or through headphones.
- When the SPEAKER button is set to off to listen with headphones while playing the multi-channel digital signals from DTS or Dolby Digital sources, it will enter the 2CH downmix mode automatically.

When adjusting the Dolby Pro Logic II Music parameters

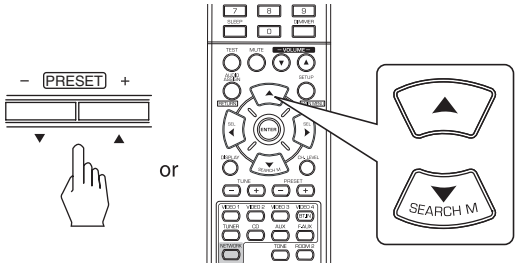
- While playing digital signals from Dolby Digital or Dolby TrueHD program source or listening in Dolby Pro Logic II/Dolby Pro Logic IIx Music mode or Dolby Pro Logic IIz mode, you can adjust their parameters for optimum surround effects.

1. Press the SOUND PARAMETER button.



- Then the parameter mode ("PANORAMA : ~ ", “DRC : ~”, etc.) is displayed for several seconds.
- If the parameter mode disappears, press this button again.

2. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired parameter.

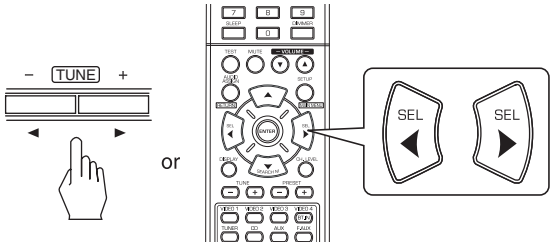


- Each time these buttons are pressed, the parameter mode changes as follows:

→ "PANORAMA" ↔ "C.WIDTH" ↔ "DIMENSION" ←
→ "H.GAIN" ↔ "DRC" ←

- "PANORAMA", "C.WIDTH" and "DIMENSION" can be selected only while listening in Dolby Pro Logic II Music mode or Dolby Pro Logic IIx Music mode.
- "DRC" can be selected only while playing digital signals from Dolby Digital or Dolby TrueHD program source.
- "H.GAIN" can be selected only while listening in Dolby Pro Logic IIz mode.

3. Press the CURSOR LEFT(◀)/ RIGHT(▶) buttons to adjust the selected parameter as desired.



■When selecting the "PANORAMA" mode

This mode extends the front stereo image to include the surround speakers for an exciting "wraparound" effect with side wall imaging.
Select "OFF" or "ON"(default value: OFF).

■When selecting the "C. WIDTH (Center width)" control

This adjusts the center image so it may be heard only from the center speaker, only from the left/right speakers as a phantom image, or from all three front speakers to varying degrees.
The control can be set in 8 steps from 0 to 7(default value : 3).

■When selecting the "DIMENSION" control

This gradually adjusts the soundfield either towards the front or towards the rear. The control can be set in 7 steps from -3 to +3 (default value : 0).

Continue

■When selecting the "DRC (Dynamic Range Compression)"

• This function compresses the dynamic range of previously specified parts of the Dolby Digital or Dolby TrueHD sound track (with extremly high volume) to minimize the difference in volume between the specified and non-specified parts. This makes it easy to hear all of the sound track when watching movies at night at low levels.

■Note :

• In some Dolby Digital softwares, DRC setting may not be valid.

AUTO : To adjust the dynamic range compression automatically
↕
OFF : To turn off the DRC function
↕
MID
↕
MAX

Higher compression

• "AUTO" can be selected only while playing digital signals from Dolby TrueHD program source.

■When selecting the "H.GAIN (Height gain)"

• You can adjust the front height channel level as desired.

LOW : To decrease the front height channel level
↕
MID : To output the front height channel sound with standard sound volume level.
↕
HIGH : To increase the front height channel level.

4. Repeat the above steps 2 and 3 to adjust other parameters.

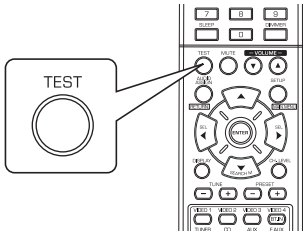
Adjusting each channel level with test tone

• The volume level of each channel can be adjusted easily with the test tone function.

■Note :

• When the SPEAKER button is set to off, the test tone function does not work.

1. Enter the test tone mode.

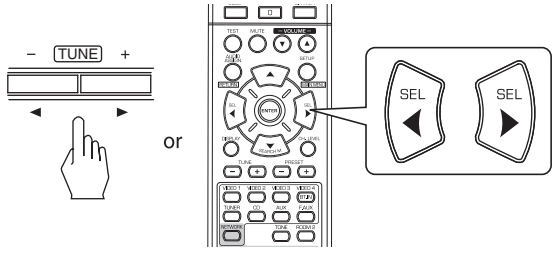


• The test tone mode is displayed and will be heard from the speaker of each channel for 2 seconds as follows:

FL [→FHL] → C [→FHR] → FR → SR
Front Left / Front Heigt Left / Center / Front Height Right / Front Right / Surround Right
SW ← SL ← (SBL ← SBR)
Subwoofer / Surround Left / Surr.Back Left / Surr.Back Right

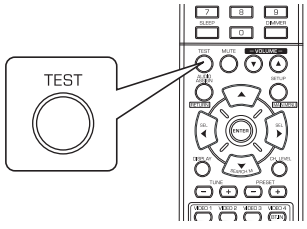
• When the speaker setting is "NO", the test tone of the corresponding channel is not available.
• ( ) : Possible depending on whether the surround back speaker is set to 2ch("L2", "S2") or 1ch("L1", "S1").
• [ ] : Possible only when the front height speaker ("F.HEIGHT") is not set to "NO".

2. At each channel, adjust the level as desired until the sound level of each speaker is heard to be equally loud.



• You can select the desired channel with pressing the CURSOR UP(▲)/DOWN(▼) buttons.

3. Cancel the test tone function.



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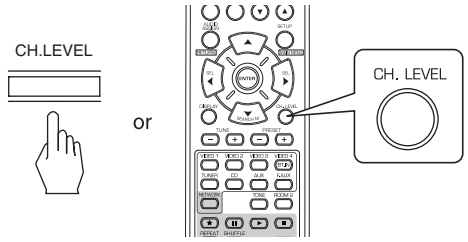
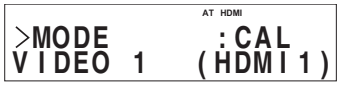
Adjusting the current channel level

- After adjusting each channel level with test tone, adjust the channel levels either according to the program sources or to suit your tastes.
- You can adjust the current channel levels as desired. These adjusted levels are just memorized into user's memory ("CAL"), not into preset memory("REF 1", "REF 2").

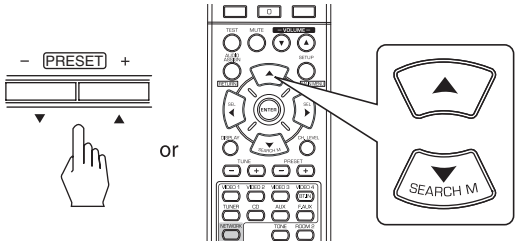
1. Press the CHANNEL LEVEL button.





- Then the memory mode ("CAL", etc.) is displayed for several seconds.
- When the memory mode or channel level disappears, press this button again.

2. Select the desired channel.



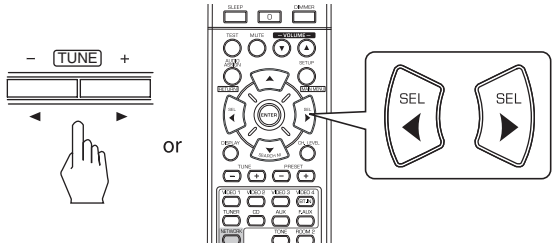
- Each time these buttons are pressed, the corresponding channel is selected as follows:

→REF1, 2(or CAL)↔LEFT[↔FH LEFT]↔CENTER[↔FH RIGHT]↔RIGHT ←
↳ <DD or DTS>↔SUBW ↔SURR L(↔SBACK L↔SBACK R)↔SURR R ↲

( ) : Possible depending on whether the surround back speaker is set to 2ch("L2", "S2") or 1ch("L1", "S1").
[ ] : Possible only when the front height speaker is not set to "NO".
< >: Possible only when the digital signals from Dolby Digital, DTS, Dolby TrueHD or DTS HD program sources that include LFE signal are input.

- Depending on the speaker settings ("NO") and surround mode, etc., some channels cannot be selected.
- When the SPEAKER button is set to off, only the Front Left, Front Right (and LFE) channels can be selected.

3. Adjust the level of the selected channel as desired.



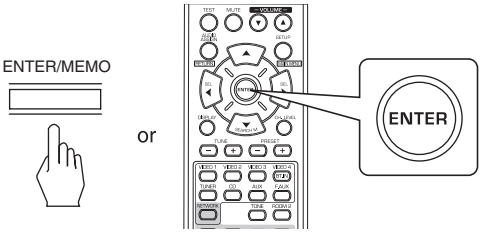
- The LFE level can be adjusted within the range of -10 ~ 0 dB and other channel levels within the range of -15 ~ +15 dB.
- In general, we recommend the LFE level to be adjusted to 0 dB.(However, the recommended LFE level for some early DTS software is -10 dB.) If the recommended levels seem too high, lower the setting as necessary.

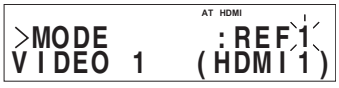
4. Repeat the above steps 2 and 3 to adjust each channel level.

Memorizing the adjusted channel levels

• You can memorize the adjusted channel levels into preset memory("REF 1", "REF 2") and recall the memorized whenever you want.

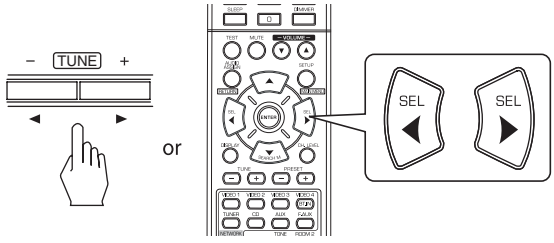
1. After performing the steps 1 ~ 4 in "Adjusting the current channel level" procedure on page 24, press the ENTER(/MEMORY) button.





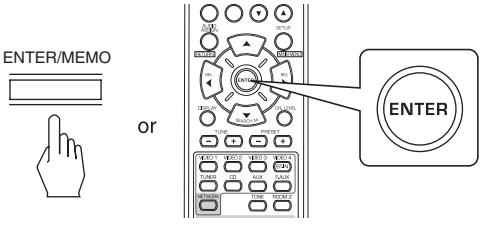
• Then "1" of "REF 1" indication flickers for several seconds.

2. Select the desired one of REF 1 and REF 2.



• If the preset memory disappears, perform the above step 1 again.

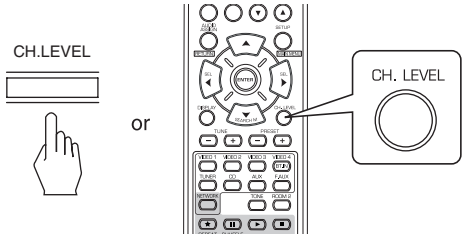
3. Confirm your selection.



• The adjusted channel levels have now been memorized into the selected memory.

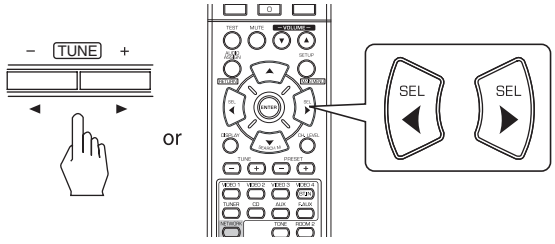
Recalling the memorized channel levels

1. Press the CHANNEL LEVEL button.



• "CAL " (or "REF 1", etc.) is displayed for several seconds.
• If the channel level mode display disappears, press this button again.

2. Select the desired one of REF 1 and REF 2.



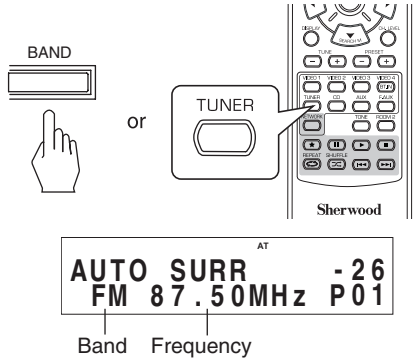
• Then the channel levels memorized into the selected preset memory are recalled.

ENGLISH

LISTENING TO RADIO BROADCASTS

Auto tuning

1. Select the desired band.

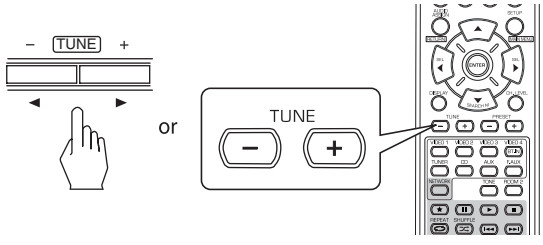


- Each time this button is pressed, the band changes as follows ;

→ FM STEREO → FM MONO → AM → SIRIUS
("▼" lights up) ("▼" lights up)

- When FM stereo broadcasts are poor because of weak broadcast signals, select the FM mono mode to reduce the noise, then FM broadcasts are reproduced in monaural sound.
- To listen to SIRIUS Satellite Radio, select SIRIUS mode. (For details, refer to “SIRIUS Satellite Radio(only for North America)” on page 28.)

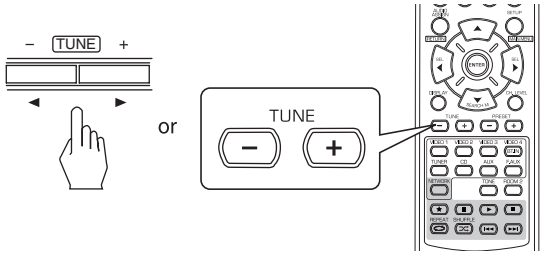
2. Press the TUNING UP(+)/DOWN(-) buttons for more than 0.5 second.



- The tuner will now search until a station of sufficient strength has been found. The display shows the tuned frequency.
- If the station found is not the desired one, simply repeat this operation.
- Weak stations are skipped during auto tuning.

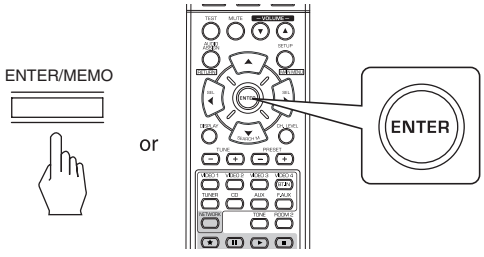
Manual tuning

- Manual tuning is useful when you already know the frequency of the desired station.
- After selecting the desired band, press the TUNING UP(+) / DOWN(-) buttons repeatedly until the right frequency has been reached.



Auto presetting

- Auto presetting function automatically searches for FM stations only and store them in the memory.
- While listening to FM radio broadcasts, press and hold down the ENTER(/MEMORY) button for more than 2 seconds.



- Then "AUTO MEM" flickers and this receiver starts auto presetting.
- To stop auto presetting, press this button again.
- Up to 30 FM stations can be stored.

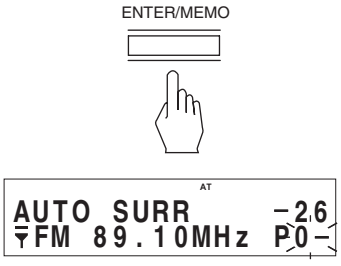
■**Notes**:
- FM stations of weak strength cannot be memorized.
- To memorize AM stations or weak stations, preform "Manual presetting" procedure with using "Manual tuning" operation.

Manual presetting

• You can store up to 30 preferred stations in the memory.

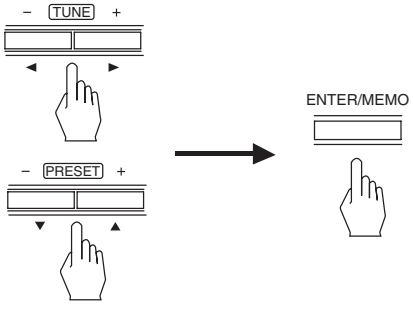
1. Tune in the desired station with auto or manual tuning.

2. Press the ENTER(/MEMORY) button.

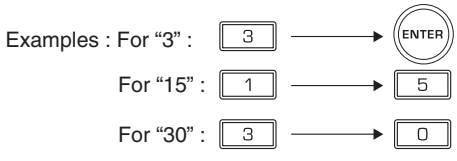


• The preset number flickers.

3. Select the desired preset number (1~30) and press the ENTER(/MEMORY) button.



• When using the NUMERIC buttons on the remote control.



• The station has now been stored in the memory.
• When specifying a two digit number with using the NUMERIC buttons, the station is stored automatically without pressing the ENTER(/MEMORY) button.
• A stored frequency is erased from the memory by storing another frequency in its place.

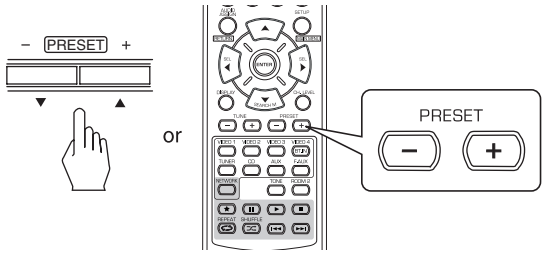
4. Repeat the above steps1 to 3 to memorize other stations.

■MEMORY BACKUP FUNCTION

The following items, set before the receiver is turned off, are memorized.
• INPUT SELECTOR settings
• Surround mode settings
• Preset stations,etc.

Tuning to preset stations

• After selecting the tuner as an input source, select the desired preset number.



• When using the NUMERIC buttons on the remote control.

Examples: For “3” : 3

For “15” : 1 within 2 seconds 5

For “30” : 3 within 2 seconds 0

SIRIUS Satellite Radio (only for North America)

• This receiver is a SIRIUS Satellite Radio Ready® receiver. You can receive SIRIUS® Satellite Radio by connecting to the SiriusConnect Home Tuner kit (sold separately) and subscribing the SIRIUS service.

ENGLISH

■What SIRIUS Satellite Radio ?

Simply The Best Radio on Radio™ with all your favorite entertainment including 100% commercial-free music, plus superior sports coverage, uncensored talk and comedy, world-class entertainment, news, weather and more for your car, home or office. For more information, visit sirius.com or siriuscanada.ca

Sirius is available in the US for subscribers with address in the continental US and is available in Canada for subscribers with a Canadian address. Required subscription plus compatible SIRIUS tuner and antenna are required and sold saparately. SIRIUS Programming is subject to change. Visit sirius.com for the most complete and up-to-date channel lineup and product information.

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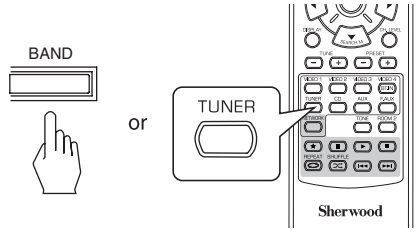
LISTENING TO SIRIUS SATELLITE RADIO

Signing up for SIRIUS Satellite Radio

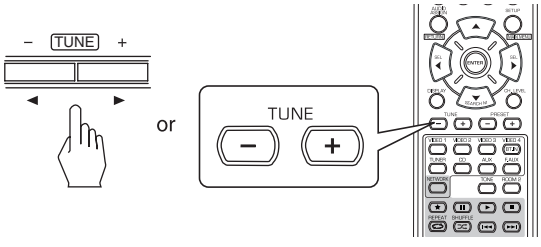
• Before using SIRIUS Satellite Radio, you must first sign up for an account. You will need a major credit card and your SIRIUS Satellite Radio ID, which you can get from this receiver, as explained below, or from the Sirius-Connect Home tuner package.

1. Press the BAND button or the TUNER button repeatedly until the SIRIUS mode is selected.



• Then SRIUS is displayed for several seconds.

2. Press the TUNING UP(+)/DOWN(-) buttons repeatedly to select SR 000.

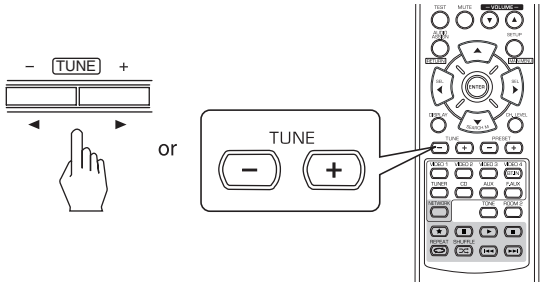


• Then your SIRIUS Satellite Radio ID is displayed. Write it below.
SIRIUS ID : _____

3. To sign up, access the website at "http://activate.siriusradio.com" or call "1-888-539-SIRIUS(7474)".

Channel search

• In the SIRIUS mode, press the TUNING UP(+)/DOWN(-) buttons repeatedly to select the desired channel.

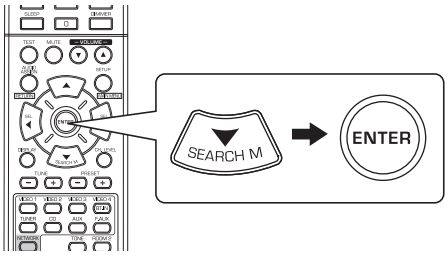


• If some channels are skipped, perform the “ALL CHANNEL SKIP CLEAR” procedure to reset the skipped channels. (For details, refer to “When selecting the ALL CHANNEL SKIP CLEAR” on page 31.)

Direct search

• You can select a SIRIUS Satellite Radio channel directly by entering its number.

1. In the SIRIUS mode, press the SEARCH MODE button to select the direct search mode, then press the ENTER button.



• Each time the SEARCH MODE button is pressed, the search mode changes as follows:

→ DIR SRCH → CAT SRCH → OFF
(Direct search) (Category search)

• Then "SR - - -" is displayed.

2. While displaying "SR - - -", select the desired channel number with pressing the NUMERIC (0~9) buttons.

Examples:

For "3" : [0] within 4 seconds [0] within 4 seconds [3]

For "27" : [0] within 4 seconds [2] within 4 seconds [7]

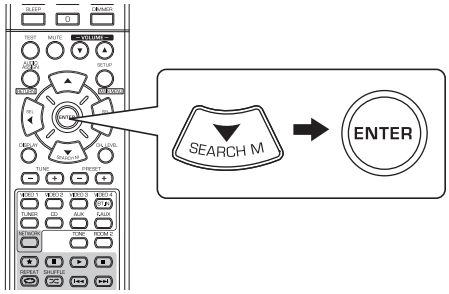
For "124" : [1] within 4 seconds [2] within 4 seconds [4]

• When "SR - - -" disappears, repeat again from the above step 1.

Category search

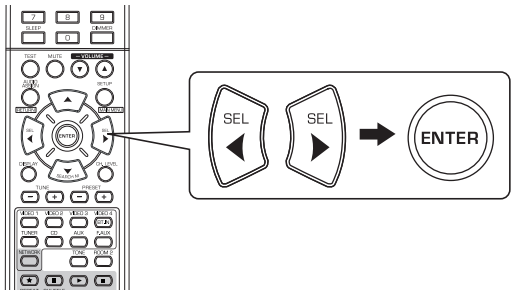
• Category search allows you to select the desired channel by the selected category.

1. In the SIRIUS mode, press the SEARCH MODE button to select the category search mode, then press the ENTER button.



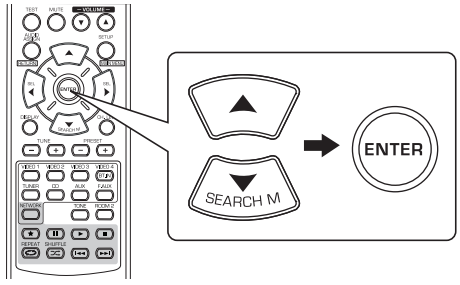
• Then a category is displayed.

2. While displaying a category name, select the desired category, then press the ENTER button.



• Each time the SELECT ◀/▶ buttons are pressed, one of different categories is selected.
• Then a channel that is broadcasting the selected category is displayed.
• When a category name disappears, repeat again from the above step 1.

3. While displaying the channel, select the desired channel, then press the ENTER button.



Presetting channels

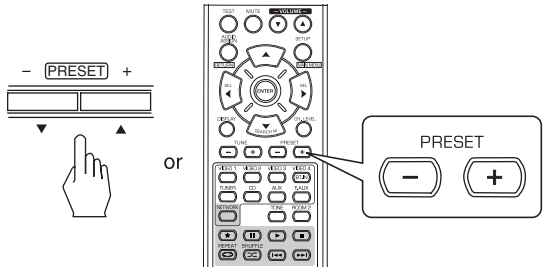
• You can store up to 30 preferred channels in the memory.

1. Select the desired channel with preforming channel search, direct search or category search.

2. To memorize the channels, perform the steps 2 to 4 in "Manual presetting" procedure on page 27.

Preset search

• In the SIRIUS mode, select the desired preset channel.



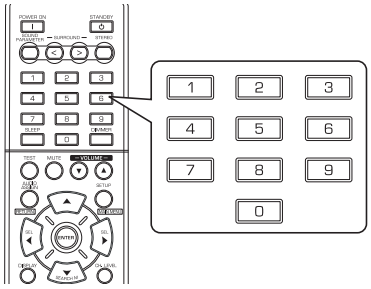
ENGLISH

■Tuning in the previously locked channels.

① Tune in the channels to which the parental lock is applied by performing direct search only.

• Then "LOCK _ " is displayed for several seconds.

② While displaying "LOCK _ ", input the password (4-digit number) with using the NUMERIC (0~9) buttons.



• When you input the correct code, the current channel can be heard(, not be unlocked).

• If the wrong password is input, "INCORECT CODE" is displayed. In this case, input the password again by performing the steps ① and ②.

• When "LOCK _ " disappears, repeat again from the above step ①.

■Notes:

• For details on the password, refer to “When selecting the PASSWORD SET” on page 32.

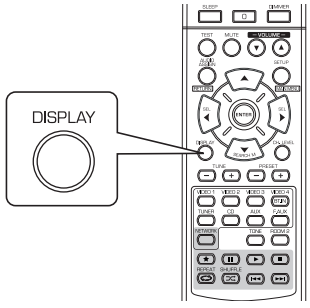
• You can also set the parental lock on the PARENTAL LOCK menu.(For details, refer to “When selecting the PARENTAL LOCK” on page 32.)

• The channels to which the parental lock is applied cannot be tuned in by performing channel search or category search.

Displaying SIRIUS information

• You can display SIRIUS information such as channel name, artist name, song title and signal strength.

• In the SIRIUS mode,



• Each time the DISPLAY button is pressed, the display mode changes as follows:

→ Signal input → Channel name → Song title → Artist name →
Input source ← Signal strength ← Category ← Composer name ←
(“SIRIUS”) ("EXCELLENT", "GOOD", "WEAK", "NO SIGNAL")

■Note:

• If the information on artist name, song title or category, etc. is not available, it will not be displayed correctly.

■Signal strength display mode

• If the reception is poor, you can check the signal strength of the SIRIUS Satellite Radio signal and adjust the position of the SiriusConnect Home antenna until "EXCELLENT" is displayed.

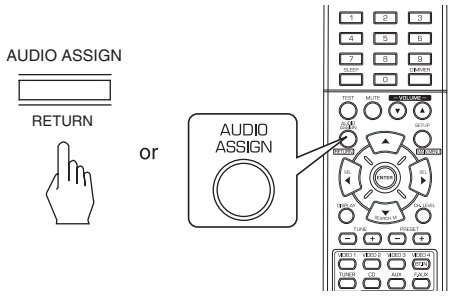
■Error message and status

• If an operation takes longer than usual or an error occurs, one of the following messages may be displayed.

Message	Status
ANTENNA	The SiriusConnect Home tuner is not connected properly. Check it.
UPDATING	Displayed while the encoding code is being updated. Please wait.
SUB UPDATED	Displayed while updating contract information. Please wait.
NO SIGNAL	The signal cannot be received. Reposition your SiriusConnect Home Tuner antenna.
LINKING	The selected channel is not currently broadcasting. Select another channel.
CHECK SIRIUS TUNER	The SiriusConnect Home tuner is not connected properly. Check it.

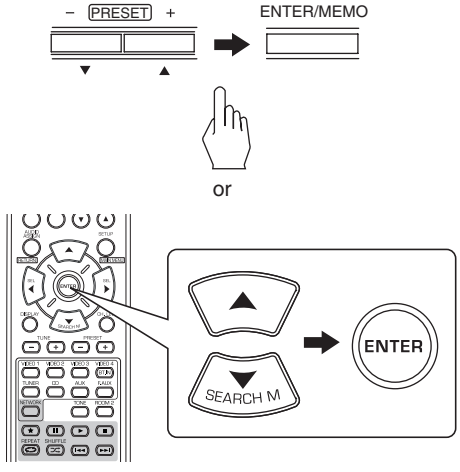
SIRIUS setup

1. In the SIRIUS mode, press and hold down the AUDIO ASSIGN button for more than 3 seconds.



- The SIRIUS setup menu("ALL CHANNEL SKIP CLEAR", etc.) will be shown.
- To turn the menu off, press this button again.
- When this button is pressed on a sub-menu, it will return to the previous menu, too.

2. Select the desired item, then confirm your selection.



- Each time the CURSOR UP(▲)/DOWN(▼) buttons are pressed, the item is selected as follows :

ALL CHANNEL SKIP CLEAR ↔ PARENTAL LOCK ↔ PASSWORD SET

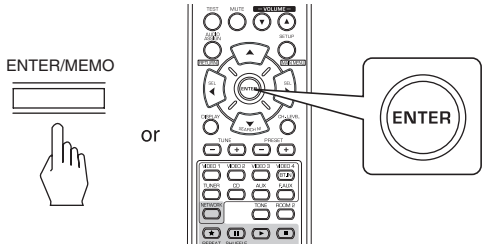
■Note :

- When the SIRIUS setup is performed for the first time, you should do the PASSWORD SET procedure first.

■When selecting the ALL CHANNEL SKIP CLEAR

- When some channels are skipped during channel search, you can reset the skipped channels by performing this procedure.
- Then "CLEAR ?" is displayed.

3. Press the ENTER(/MEMORY) button.



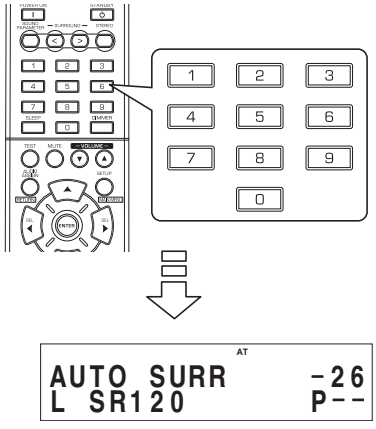
- The skipped channels are all reset and the previous menu will be returned to.

ENGLISH

■When selecting the PARENTAL LOCK

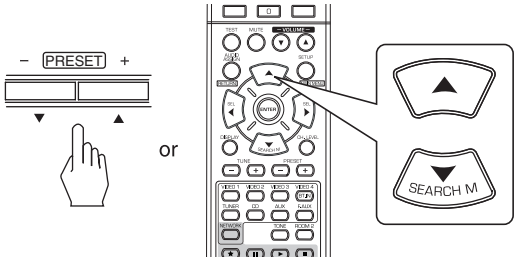
- You can lock the channels that you do not want to receive or unlock the previously locked channels.
- Then “LOCK _” is displayed.

3. Input the password (4-digit number) with using the NUMERIC(0~9) buttons.

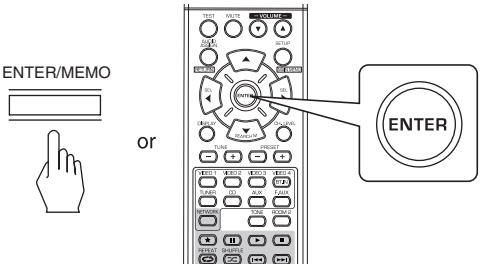


- When you input the correct code, the current channel is locked (or unlocked).
- If the wrong password is input, “INVALID” flickers and then “LOCK _” is displayed. In this case, input the password again.

4. Select the channel you want to lock or unlock.



5. Set the selected channel as desired.



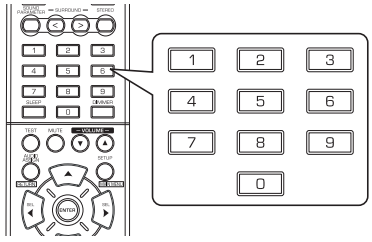
- Each time the ENTER(/MEMORY) button is pressed, “L” is displayed (Lock mode) or not (Unlock mode).

6. Repeat the above steps 4 and 5 to set the channels as desired.

■When selecting the PASSWORD SET

- You can change the password to the desired.
- Then “CURR : _” is displayed.
- When the PASSWORD SET is performed for the first time, “NEW:_” is displayed. In this case, perform the steps 4 and 5(, but ignore the step 3).

3. Input the current password (4-digit number) with using the NUMERIC(0~9) buttons.



- When you input the correct code, “NEW : _” is displayed.
- If the wrong password is input, “INVALID” flickers. In this case, input the password again.

4. To input the new password (4-digit number), perform the above step 3.

- When you input the correct code, “RPT : _” is displayed.

5. To confirm the new password, repeat the above step 3 to input it.

- If the correct password is input, “COMPLETE” is displayed and the previous menu will be returned to.

■Note :

- Do not forget the password.
  If you forgot your password, you cannot lock or unlock the channel.

LISTENING TO INTERNET RADIO BROADCASTS, MUSIC FILES

• You can listen to Internet radio broadcasts or music files stored on a USB memory device or a computer (media server).

■Internet Radio
• Internet radio refers to radio broadcasts distributed over the internet. Internet radio stations from around the world can be tuned in by accessing Internet radio websites like Pandora, Reciva, Shoutcast and Aupeo.

◆Pandora (http://www.pandora.com)
Pandora is a paid music broadcast service provided by Pandora. Before using Pandora, you will need to visit the Pandora website on your computer to create an account and to register as a member.

◆Reciva (http://www.reciva.com)
Reciva is a free internet radio broadcast service provided by Reciva. Before using Reciva, you will need to visit the Reciva website on your computer to create an account and to register as a member.

◆Shoutcast (http://www.shoutcast.com)
Shoutcast is a free internet radio broadcast service provided by Shoutcast. You can use Shoutcast without registration.

◆Aupeo (http://www.aupeo.com)
Aupeo is a free internet radio broadcast service provided by Aupeo. Before using Aupeo, you will need to visit the Aupeo website on your computer to create an account and to register as a member.

■Note :
• There are many Internet radio stations on the Internet, and the quality of the programs they broadcast as well as the bit rate of the tracks varies widely. Generally, the higher the bit rate, the higher the sound quality, but depending on the communication lines and server traffic, the music or audio signals being streamed may be interrupted. Inversely, lower bit rates mean a lower sound quality but less tendency for the sound to be interrupted.

■USB Memory Devices
• A USB memory device can be connected to the USB connetor either on the front panel or on the rear panel to play music files stored on it.
• Only USB memory devices conforming to mass storage class and MTP(Media Transfer Protocol) standards can be played on this unit.
• This unit supports FAT16 or FAT32 file format system for USB memory device.

■Media Player
• This function lets you play music files stored on a computer (media server) connected to this unit via a wireless network. You can share the music files easily by using Windows Media Player ver 11.

■Note :
• You should connect the computer (media server) to the same local network with this unit.

■Compatible Audio File Formats
• For Internet radio, USB memory device and media server playback, this unit supports the following music file formats.

File format	Sampling frequency	Bit rate	Extension
MP3 (MPEG-1 Audio Layer-3)	32/44.1/48 kHz	32~ 320 kbps	.mp3, .MP3
WMA (Windows Media Audio)	32/44.1/48 kHz	32~ 320 kbps	.wma, .WMA

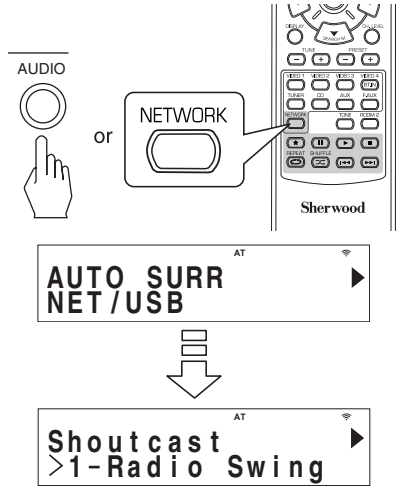
• Variable bit-rate files are supported.
• MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thomson.
• Windows Media and the Windows logo are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.

Basic Operation

1. Make the necessary preparations.

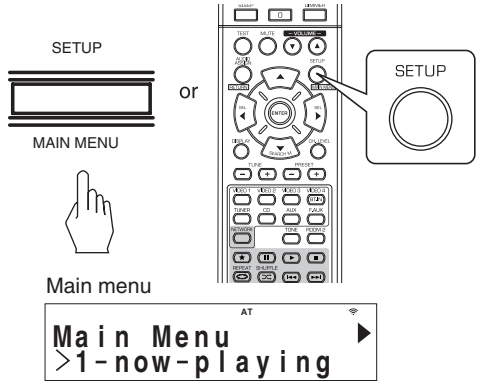
① Check the network environment, then turn on this unit. (See “CONNECTING TO NETWORK” on page 11.)
② If settings are required, register your accounts and make the network settings, etc. (See “When selecting “settings”” on page 40.)
③ If the computer is used as a media server, prepare the computer. Install Windows Media Player ver 11. (See “Configuring the Windows Media Player ver 11.” on page 39.)

2. Select the “NET/USB” as an input source.



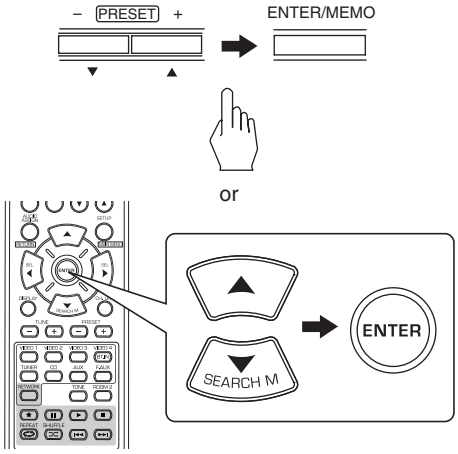
- The “NET/USB” is selected and then the status memorized last will be resumed.
- When the power is turned on and then “NET/USB” is selected, the main menu is displayed (see the step 3 below).

3. To select an item on the main menu, press the SETUP(/MAIN MENU) button.



- Then the main menu is displayed.

4. Select the desired item, then press the ENTER button.



- When selecting “now playing” , see page 36.
- When selecting “music services” , see page 36.
- When selecting “internet radio” , see page 38.
- When selecting “music library” , see page 38.
- When selecting “dmc” , see page 39.
- When selecting “favorites” , see page 40.
- When selecting “settings” , see page 40.
- For details on setup menu flow, see page 35.

5. Repeat the above step 4 until the desired station, music file or setting option, etc. is selected.

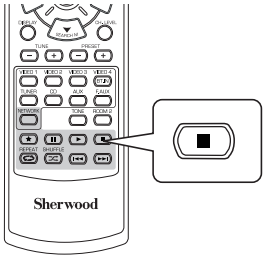
- Then the selected is played or set to.
- When the AUDIO ASSIGN(/RETURN) button is pressed on a sub-menu, it will return to the previous status.
- When the SETUP(/MAIN MENU) button is pressed on a sub-menu, it will return to the main menu.

■Playback operations

- During playback of internet radio broadcasts or music files, you can play them in different playback modes.

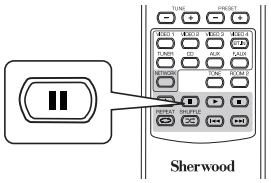
◆To stop playback

During playback, press the Stop(■) button.



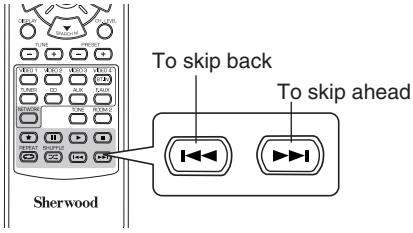
- Then the playback will be stopped.
- To start playback, press the PLAY(▶) button.

◆To pause playback
During playback, press the PAUSE(❚❚) button.



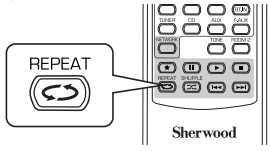
- Then the playback will be stopped at the point where this button is pressed.
- To resume playback from this point, press the PLAY(▶) button.

◆To skip ahead or back
During playback of music file.



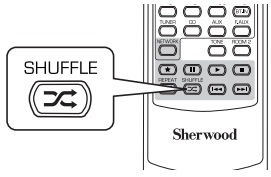
- Each time the button is pressed, a music file is skipped.

◆To play repeatedly
During playback of the desired music file, press the REPEAT(⟲) button.



- Then " ⟲ " lights up and the music files on the folder are played repeatedly.
- To cancel the repeat playback, press this button again.

◆To play in random order
During playback of music files, press the SHUFFLE(⤮) button.

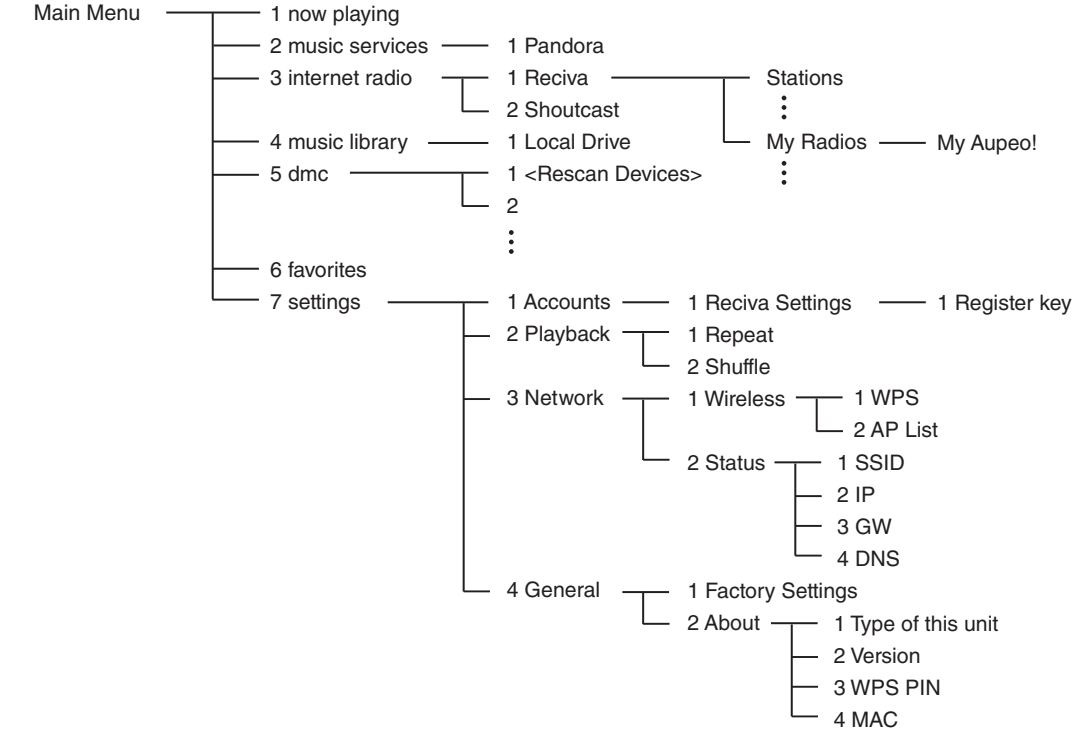


- Then " ⤮ " lights up and the music files on the folder are played in random order.
- To cancel the random playback, press this button again.

■Note :
- The skip mode, repeat mode and random mode can be used when playing only music files stored on a USB memory device.

- For your reference, setup menu flow is as follows :

■ Setup menu flow



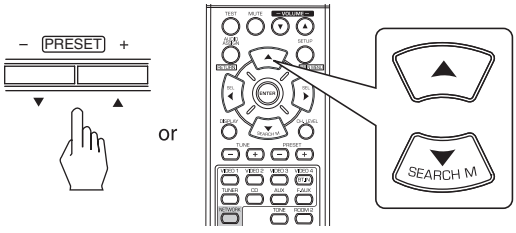
ENGLISH

When selecting “now playing”

• You can display the information on the Internet radio broadcast or music file being played.

Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired display mode.

Example: When playing an Internet radio broadcast



• Each time the button is pressed, the mode changes as follows

station or device name ↔ song title
Add to favorites* ↔artist name ↔album name

* : Available only while playing music files or Internet radio broadcasts provided by Shoutcast.

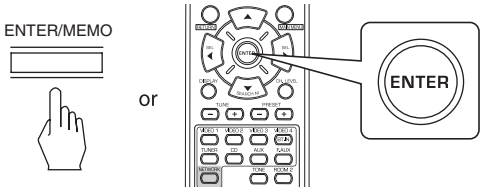
■Notes :

• Characers except “A~Z”, “a~z”, “0~9”, “-” may not be displayed.

• If the information on station name, song title or artist name, etc. is not available, it will not be displayed correctly.

■When selecting the “Add to favorites”

① Press the ENTER button.



• Then “OK” is displayed.

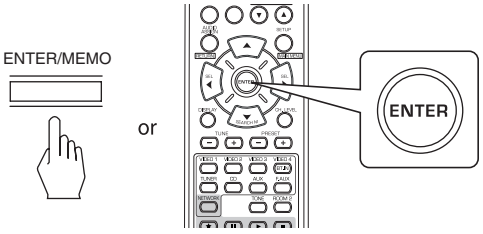
② Press the ENTER button to confirm your selection.

• Then the station or music file is registered in the favorite list. (For details on the favorite operation, see “When selecting “favorites”” on page 40.)

When selecting “music services”

• To listen to music broadcasts by accessing Pandora website on this unit, first you should enter the same email address and password that you registered on its website (http://www.padora.com) on the computer. (For details, see the Pandora homepage.)

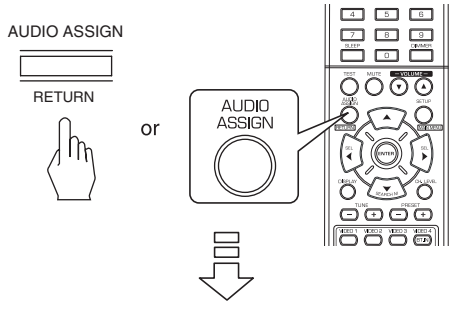
1. Press the ENTER button.



• Then a music broadcast is played.

• When you select the Padora for the first time or the “Sign Out” on the Pandora menu, register your account first. (For details, see “Registering your account” on page 37.)

2. While playing a music broadcast, press the AUDIO ASSIGN(/RETURN) button.

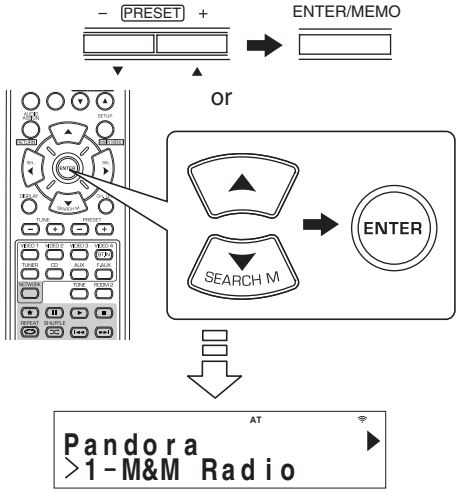


Pandora broadcast list

• Then the Pandora broadcast list is displayed.

• Each time this button is pressed, the previous status is returned to.

3. Select the desired music broadcast, then press the ENTER button.



• Each time the CURSOR UP(▲) or DOWN(▼) button is pressed, the music broadcasts are selected.

• When you want to search for a music broadcast by name (or a keyword from within its title), select “Create Station”.

◆When selecting "Create Station"

• Then the name entry menu is displayed.

① Press the CURSOR UP(▲)/DOWN(▼) buttons to enter the desired character.
  • You can enter the desired among A~Z, a~z, 0~9, symbols (@, ., ----, blank).
② Press the CURSOR RIGHT(▶) button to move to next digit.
  • To delete a character, press the CURSOR LEFT(◀) button. Each time this button is pressed, characters are deleted one by one in the opposite sequence.
③ Repeat the above steps ① and ② to complete the entry.
④ Press the ENTER button to confirm your entry.
  • Then the "Search Results" is displayed.
  • Depending on the name you entered, it may take times to search for music broadcasts.
⑤ Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired music broadcast, then press the ENTER button.

• Then the selected broadcast is played.
• While playing a music broadcast, each time the CURSOR UP(▲) or DOWN(▼) button is pressed, the display mode changes as follows :

→station name ↔song title↔album name ↔artist name ←

■Adding or deleting a music broadcast

① While playing the desired music broadcast, press the ENTER button.

• Then the Pandora menu is displayed.

② Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired item, then press the ENTER button.

• To add the music broadcast to the Pandora broadcast list, select "Bookmark this song" or "Bookmark this artist".
• To rate a song up or down, select "Why this song?" or "I am tired of this song".
• To rename the station, select "Rename current station".
• To delete the music broadcast in the Padora broadcast list, select "Delete current station".
• To sign out from the Pandora website, select "Sign Out".

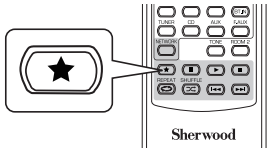
③ Perform the setting operations required.

• When entering a new name, perform the steps ① ~ ④ in "When selecting "Create Station"" procedure above.

■Rating a song up or down

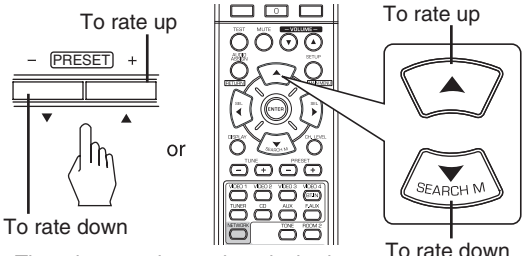
• If you rate a song up or down, Pandora will play more music like this song or will not play.

① While playing a song to be rated, press the RATING(★) button.



• Then "Thumbs up/down" is displayed for 5 seconds.

② While displaying "Thumbs up/down", press the CURSOR UP(▲)/ DOWN(▼) buttons to rate a song up or down.



• Then the song is rated as desired.

■Registering your account

• When you select the Pandora for the first time or the "Sign Out" on the Pandora menu, you should register your account.

① Press the CURSOR UP(▲)/ DOWN(▼) buttons to select the desired item, then press the ENTER button.
  • Each time the CURSOR UP(▲) or DOWN(▼) button is pressed, the item is changed as follows.

→Back : Select this to return to the previous status
↕
No : Select this when you don't have a Pandora account
↕
→Yes : Select this when you have it.

◆When selecting "Yes"

Then email entry menu is displayed.

② Press the CURSOR UP(▲)/DOWN(▼) buttons to enter the desired character.
  • You can enter the desired among A~Z, a~z, 0~9, symbols (@, ., ----, blank).
③ Press the CURSOR RIGHT(▶) button to move to next digit.
  • To delete a character, press the CURSOR LEFT(◀) button. Each time this button is pressed, characters are deleted one by one in the opposite suquence.
④ Repeat the above steps ② and ③ to complete the entry.
⑤ Press the ENTER button to confirm your entry.
  • Then password entry menu is displayed.
⑥ Repeat the above steps ② ~ ⑤ to enter the password.
  • Then it will automatically access the Pandora website and play a music broadcast.
  • If the email address and password are not input correctly, this unit cannot access its website.

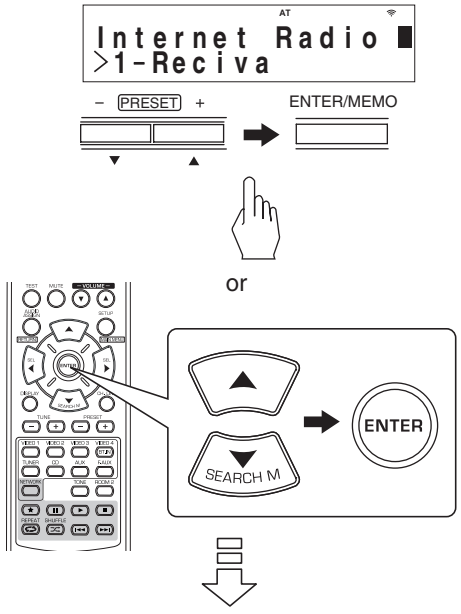
ENGLISH

ENGLISH

When selecting “internet radio”

- You can listen to Internet radio broadcasts provided by Reciva, Shoutcast or Aupeo.
- To listen to Internet radio broadcasts provided by Reciva or Aupeo on this unit, first you should access the its website (http://www.reciva.com or http://www. aupeo.com) on the computer and program the desired Internet radio broadcasts respectively by various categories. (“My Stations”, “My Streams”, “My Podcasts”, etc.). (For details, see the Reciva or the Aupeo homepage.)

1. Press the CURSOR UP(▲)/DOWN(▼) buttons to select “Reciva” or “Shoutcast”, then press the ENTER button.



Example: When selecting Reciva

2. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired category (or item), then press the ENTER button.

3. Repeat the above step 2 until the desired broadcast is listened to.

Example: When playing a broadcast provided by Reciva

- To listen to Internet radio broadcast provided by Aupeo, select it on “Reciva” menu.
- When “Search” is selected on “Reciva” menu, see “When selecting “Create Station” on page 37 for details on the setting operation.

- While playing a broadcast, each time the CURSOR UP(▲) or DOWN(▼) button is pressed, the display mode changes as follows.

station name ↔ song title ↔ album name
Add to favorites*1/ Reply*2 ↔ artist name

*1 : Available only while playing a broadcast provided by Shoutcast.

- For details on display mode, see “When selecting “now playing”” on page 36.

*2 : Available only while playing a broadcast provided by Reciva or Aupeo.

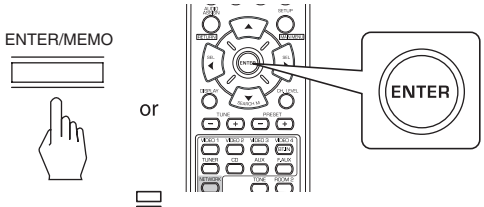
- When “Reply” is selected, perform the setting operations required.

When selecting “music library”

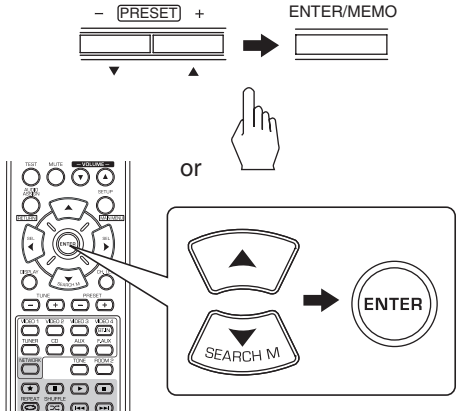
- You can listen to music files stored on a USB memory device.

1. Connect the USB memory device to the USB connector either on the front panel or on the rear panel.

2. Press the ENTER button twice to select “USB”.

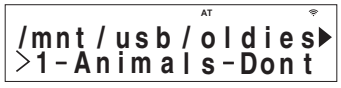


3. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired folder (or music files), then press the ENTER button.



4. Repeat the above step 3 until the desired music file is selected.

Example: When playing a music file



- While playing a music file, each time the CURSOR UP(▲) or DOWN(▼) button is pressed, the display mode changes as follows.

→ device name ↔ song title ←
↳ Add to favorites ↔ artist name ↔ album name ↵

- For details on display mode, see "When selecting "now playing"" on page 36.

When selecting "dmc"

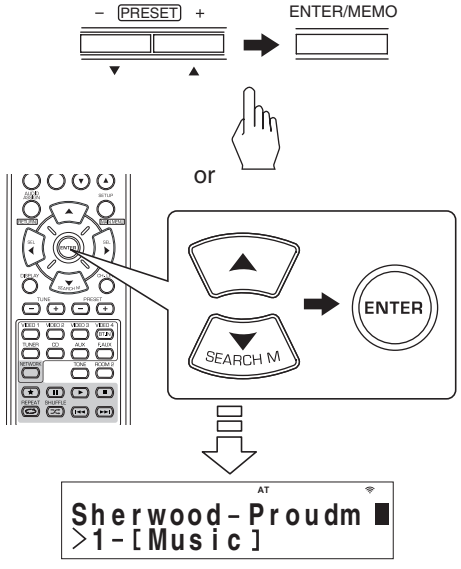
- You can listen to music files stored on a computer (media server) connected to this unit via a wireless network.

■Note :

- To play music files stored on your computer, you should configure the Windows Media Player ver 11. first. (For details, see "Configuring the Windows Media Player ver. 11" below.)

1. Start your computer (media server).

2. Press the CURSOR UP(▲)/DOWN(▼) buttons to select your computer as a media server, then press the ENTER button.



- When your computer is not displayed in the list, select "<Rescan Devices>" to rescan all available media servers.

3. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired category, then press the ENTER button.

4. Repeat the above step 3 until the desired music file is selected.

Example: When playing a music file

- While playing a music file, each time the CURSOR UP(▲) or DOWN(▼) button is pressed, the display mode changes as follows.

→ server name ↔ song title ←
↳ Add to favorites ↔ artist name ↔ album name ↵

- For details on display mode, see "When selecting "now playing"" on page 36.

■Configuring the Windows Media Player ver. 11.

1. Run the Windows Media Player ver. 11 on your computer.

2. Select "Library" tab in the menu bar, and then select "Media Sharing".

3. In the "Media Sharing" dialog box, select the "Share my media" check box, and then click "OK".

4. In the list of devices, select this unit, and then click "Allow".

5. Click "OK" to close the dialog box.

- Then the Windows Media Player ver. 11 configuration has been completed.
- You can play the music files in your Windows Media Player ver. 11 library through this unit.

■Notes :

- The Windows Media Player ver. 11 can be downloaded for free from the Microsoft Web site.
- If the fire wall resctricts access, the Windows Media Player ver. 11 cannot be configured.

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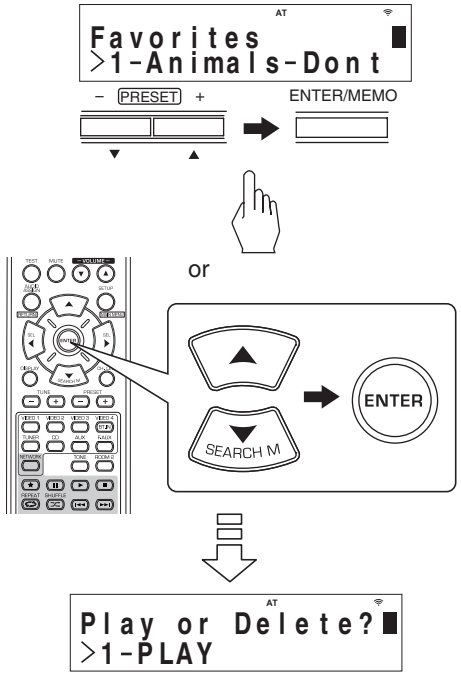
When selecting “favorites”

- You can listen to Internet radio stations (only provided by Shoutcast) or music files registered in the “favorites” list or delete them.

■Note :

- When the USB memory device is disconnected or your computer (media server) is turned off, the music files stored on them cannot be played.

1. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired station or file, then press the ENTER button.



2. Press the CURSOR UP(▲)/DOWN(▼) buttons to select “PLAY” or “DELETE”, then press the ENTER button.

Example: When playing a music file

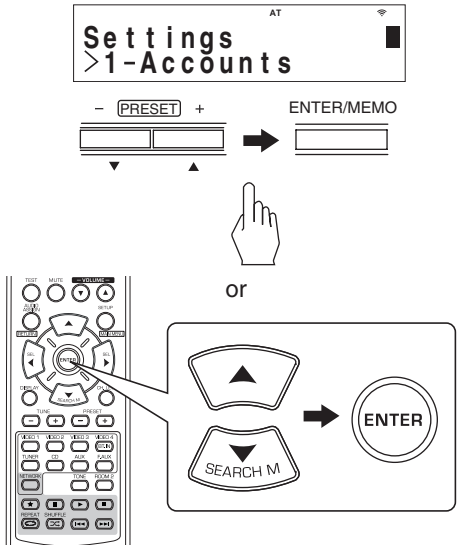
- When “PLAY” is selected, the selected station or music file will be played.
- When “DELETE” is selected, the selected station or music file will be deleted in the “favorites” list.
- While playing a station or music file, each time the CURSOR UP(▲) or DOWN(▼) button is pressed, the display mode changes as follows.

→ station/device name ↔ song title ←
→ artist name ↔ album name ←

When selecting “settings”

- When listening to Internet radio broadcasts or music files for the first time, first make settings for accounts, playback, network, etc. for optimum performance.

1. Select the desired item, then press the ENTER button.



- Each time the CURSOR UP(▲) or DOWN(▼) button is pressed, the setting mode changes as follows.

→ Accounts ↔ Playback ↔ Network ↔ General ←

■When selecting “Accounts”

- In order to access the additional features provided by Reciva, you will need to visit the Reciva website on your computer to create an account and to register your radio.

■Note :

- You cannot check the access code if you have not listened to Internet radio broadcasts provided by Reciva yet through this receiver.

2. Press the ENTER button twice to check the access code.

- Then, write down the access code to register your radio.

3. Press the ENTER button.

• Then the previous status is returned to.

4. Visit the Reciva website at www.reciva.com on your computer.

5. Create an account and register your radio.

• When you have registered your radio, you can take advantage of various additional features and services that it provides.

■When selecting "Playback"

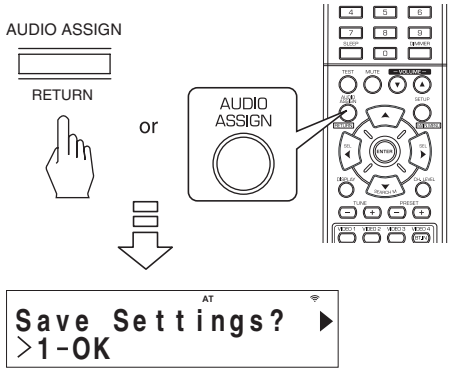
• You can play music files stored on a USB memory device in the desired playback mode.
During playback of music files, select the desired playback mode.

2. Press the CURSOR UP(▲)/DOWN(▼) buttons to select "Repeat" or "Shuffle", then press the ENTER button.

3. Press the CURSOR UP(▲)/DOWN(▼) buttons to select "off" or "on", then press the ENTER button.

• Then the selected playback mode is set as desired and the previous status is returned to.
* off : To deactivate the selected playback mode
* on : To activate it.
• For details on playback modes, see "To play repeatedly" and "To play in random order" on page 35.

4. Press the AUDIO ASSIGN(/RETURN) button to return to previous status.



5. Press the CURSOR UP(▲)/DOWN(▼) buttons to select "OK" or "CANCEL", then press the ENTER button.

• When the "OK" is selected, the playback settings are stored and the previous status is returned to.
• When the "CANCEL" is selected, the playback settings are not stored and the previous status is returned to.

■When selecting "Network"

• To listen to Internet radio stations, music broadcasts or music files stored on your computer via a wireless network, you should configure network settings first.

2. Press the CURSOR UP(▲)/DOWN(▼) buttons to select "Wireless" or "Status", then press the ENTER button.

Example: When selecting "Wireless"

• When "Wireless" is selected, you can configure network settings simply and easily.
• When "Status" is selected, you can check the information on network settings.

◆When selecting "Wireless"

3. Press the CURSOR UP(▲)/DOWN(▼) buttons to select "WPS" or "AP List", then press the ENTER button.

• If your wireless router with access point supports WPS function, you can select "WPS".
• If not, select "AP List".

*** In case of selecting "WPS"**

• Press the WPS button on your wireless router.
Then the network settings are automatically configured and the "Status" menu will be displayed to check the information on network settings.

ENGLISH

ENGLISH

*** In case of selecting "AP List"**

• This unit searches for all available wireless routers.

• Depending on whether security code is required or not while configuring network settings, "WEP"("WPA", "WPA2", etc.) or "NONE" is displayed beside the name.

① Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired of all available wireless routers, then press the ENTER button.
  • In case that security code is not required, the network settings are automatically configured and the "Status" menu will be displayed.

② In case that security code is required, perform the steps ②~⑤ in "Registering your account" procedure on page 37 to enter the sucurity code.
  • If the security code is correct, the network settings are automatically configured and the "Status" menu will be displayed.
  • It it is not correct, press the ENTER button and enter it again.

◆When selecting "Status"

3. Press the CURSOR UP(▲)/DOWN(▼) buttons to check the desired information.

• Each time the CURSOR UP(▲) or DOWN(▼) button is pressed, the information changes as follows.

→ SSID ↔ IP address ←
↳ DNS server ↔ GW(Gateway) ↵

■When selecting "General"

2. Press the CURSOR UP(▲)/DOWN(▼) buttons to select "Factory Settings" or "About", then press the ENTER button.

Example : When selecting "Factory Setting"

• When "Factory Settings" is selected, you can reset the "Playback" settings, "Network" settings and stations or music files registered in the "favorites" list to the factory default.
• When "About" is selected, you can check the general information such as type of this unit, software version, WPS PIN and MAC address.

◆When selecting "Factory Settings"

3. Press the CURSOR UP(▲)/DOWN(▼) buttons to select "OK" or "CANCEL", then press the ENTER button.

• When "OK" is selected, they are reset to the factory default.
• When "CANCEL" is selected, then the previous status is returned to without resetting.

◆When selecting "About"

3. Press the CURSOR UP(▲)/DOWN(▼) buttons to check the desired information.

• Each time the CURSOR UP(▲) or DOWN(▼) button is pressed, the information changes as follows.

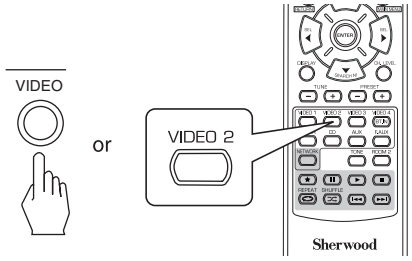
→ Type of this unit ↔ Software Version ←
↳ MAC address ↔ WPS PIN ←

RECORDING

- The digital signals from the coaxial, optical digital input or HDMI IN can be heard but cannot be recorded.
- When recording the analog signals from CD, AUX, F.AUX, BT, VIDEO 2~3, be sure to select the analog input. (For details, refer to "When an input source other than TV, NET/USB, tuner is selected" on page 17.)
- The volume and tone (bass, treble) settings have no effect on the recording signals.

Dubbing from video components onto VIDEO 1

1. Select VIDEO 2 as a recording source except VIDEO 1.



■Recording audio signals(, not video signals)

- When an audio recording equipment is connected to the AUDIO IN/OUT jacks of “VIDEO 1”, select the desired of CD, AUX, F.AUX, BT, TUNER, VIDEO 2~3.

2. Start recording on the VIDEO 1.

3. Start play on the desired input.

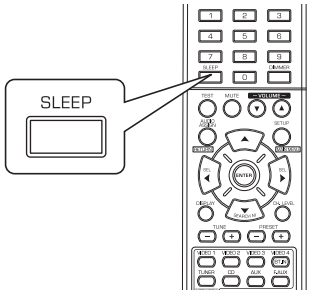
- The audio and video signals from the VIDEO 2 will be dubbed onto the VIDEO 1 and you can enjoy them on the TV set and from the speakers.

ENGLISH

OTHER FUNCTIONS

Operating the sleep timer

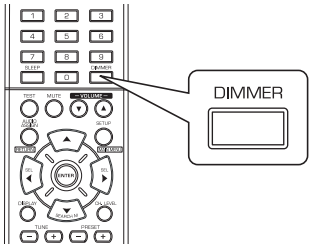
• The sleep timer allows the system to continue to operate for a specified period of time before automatically shutting off.
• To set the receiver to automatically turn off after the specified period of time.



• Each time this button is pressed, the sleep time changes as follows:
→ 10 → 20 → 30 → --- → 90 → OFF
Unit : minutes

• While operating the sleep timer, " ☾ " lights up.
• When the sleep time is selected, the fluorescent display is dimly lit.

Adjusting the brightness of the fluorescent display

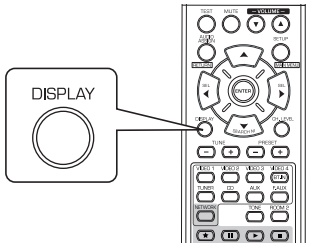


• Each time this button is pressed, the brightness of the fluorescent display changes as follows:
→ ON → dimmer → OFF

• In the display OFF mode, pressing some buttons cancel the display OFF mode to display the operation status.

Displaying the operation status

During playback,



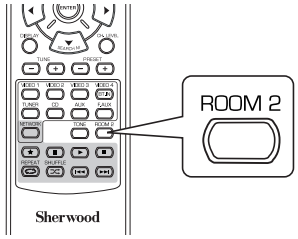
• Each time this button is pressed, the display mode changes as follows:

Signal input ↔ OFF (Normal display)

• When the SIRIUS Satellite Radio function is available in your country, for details on the SIRIUS information, see “Displaying SIRIUS information” on page 30.

Playing ROOM 2 source

• The ROOM 2 function alllows enjoying one source in the main room and playing another in a different room at the same time.



• Each time this button is pressed, the ROOM 2 MODE changes as follows:
ON : To turn on the ROOM 2 function.(“R2” lights up.)
↕
OFF : To turn it off. (“R2” goes off.)
For details on ROOM 2 playback, refer to “SETTING THE MULTI ROOM SETUP” on page 60.

■Notes :
• Even when this receiver enters the standby mode, in such a case that “R2” lights up still, meaning only the ROOM 2 circuitry operates, the ROOM 2 source can be played independently.
• When you do not use the ROOM 2 function, turn off the ROOM 2 function to save electricity.

CONFIRMING THE HDMI FUNCTION

To use the HDMI control functions properly, it is recommend to confirm the HDMI control functions usable with each connected component by performing the following operations.

■**Note :**
• Some HDMI control functions may not work with certain components and TV that are not compatible with them.

Before operation

• Check that this receiver, TV and player, etc are connected by HDMI cabels.
• Check that the HDMI control of TV and the HDMI-connectable player are enabled.
(For details on the setups of TV and player, refer to their operating instructions.)
• Set the HDMI CONTROL and the POWER CONROL to ON to enable the HDMI control of this receiver.
(For details, refer to “SETTING THE HDMI SETUP” on page 63.)

Confirming the basic HDMI operations

1. Turn the power on for all the components connected by HDMI cables.

2. Switch the TV input to the HDMI input connected to this receiver.

3. Switch this unit input to the HDMI input source.

• Confirm that its picture is displayed and the sound is heard from the speakers properly.

Confirming the HDMI control functions

1. Turn the power on for all the components connected by HDMI cables.

2. Turn the TV off to enter the standby mode.

• Confirm that all the components are turned off.

3. With all the components off, start playback on a player (connected by HDMI cable).

• Confirm that all the components are turned on and the inputs of this unit and TV are switched automatically.

System Setup

ENGLISH

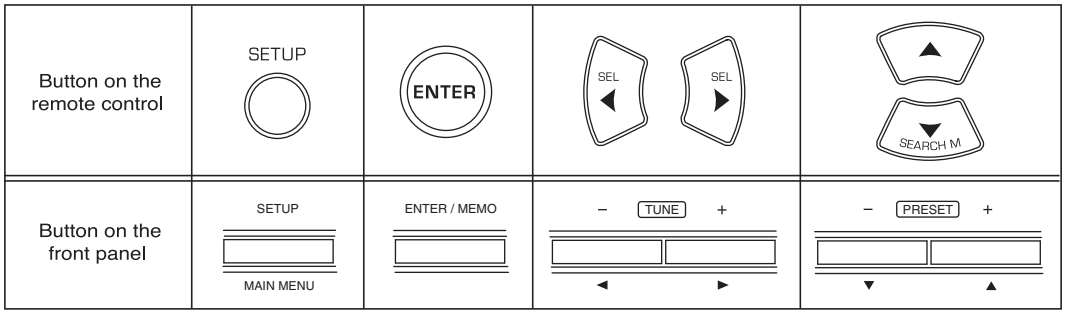
• The setup menu is displayed on the fluorescent display and allows you to perform the setup procedures easily. In most situations, you will only need to set this once during the installation and layout of your home theater, and it rarely needs to be changed later.
The setup menu consists of 7 main menus ; system, input, speaker/room EQ, CH level, multi room, parameter and HDMI. These menus are then divided up into various sub-menus.

■Note :

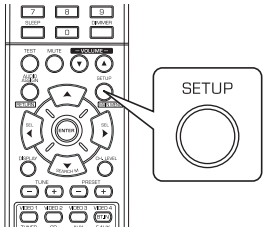
• Only when an input source other than NET/USB is selected, you can perform the system setup procedures.

■Navigating through the setup menu

• The explanations here assume you are using the buttons on the remote control when performing the setup menu operation. However, you can use the buttons on the front panel as well.
The buttons on the front panel correspond to those on the remote control as shown below.

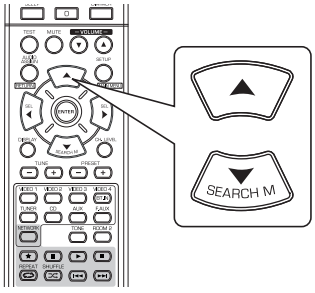


1. Turn the setup menu on.

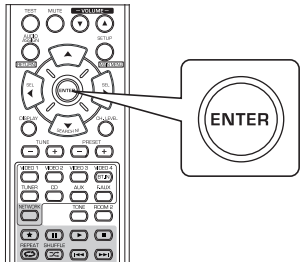


• The setup menu will be shown.
• To turn the menu off, press this button again.

2. Select the desired menu using the CURSOR UP(▲)/ DOWN(▼) buttons.



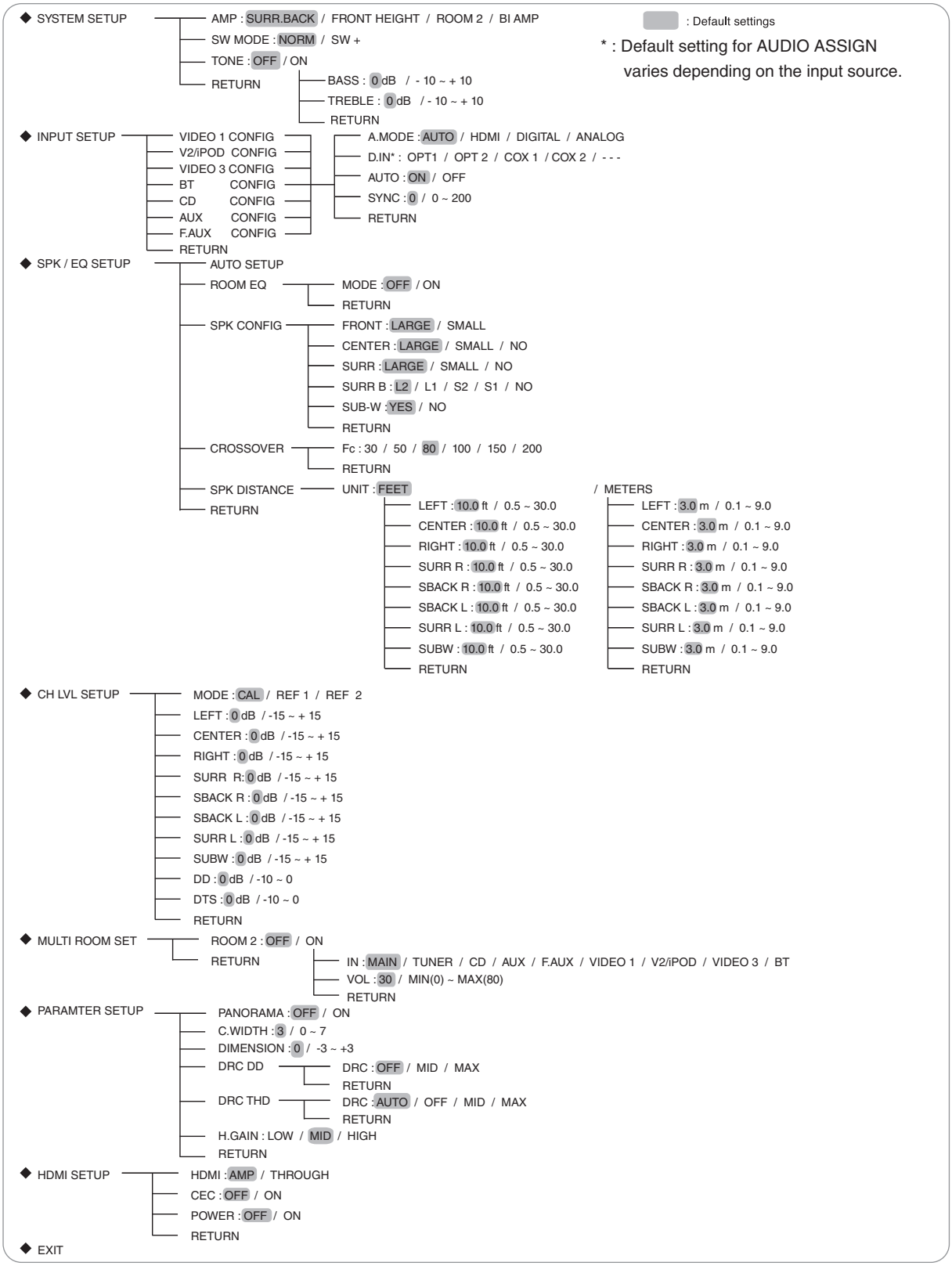
3. Confirm your selection.



• When selecting "SYSTEM SETUP", see "SETTING THE SYSTEM SETUP" on page 48.
• When selecting "INPUT SETUP", see "SETTING THE INPUT SETUP" on page 50.
• When selecting "SPK/EQ SETUP", see "SETTING THE SPEAKER/ROOM EQ SETUP" on page 52.
• When selecting "CH LVL SETUP", see "SETTING THE CH LEVEL SETUP" on page 58.
• When selecting "MULTI ROOM SET", see "SETTING THE MULTI ROOM SETUP" on page 60.
• When selecting "PARAMTER SETUP", see "SETTING THE PARAMETER SETUP" on page 61.
• When selecting "HDMI SETUP", see "SETTING THE HDMI SETUP" on page 63.
• When selecting "EXIT", the setup menu will be turned off.

■Setup menu flow

• The setup menu flow is as follows :



• When "RETURN" is selected on a sub-menu, it will return to the previous menu.
• When the AUDIO ASSIGN(/RETURN) button is pressed on a sub-menu, it will return to the previous menu, too.

■**Note :** During settup menu operation, only the (POWER ON/)STANDBY button and the buttons required for system setup will function.

ENGLISH

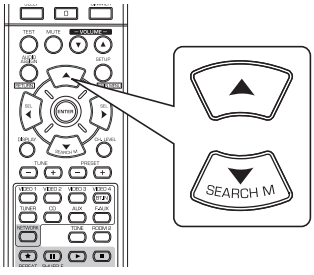
ENGLISH

SETTING THE SYSTEM SETUP

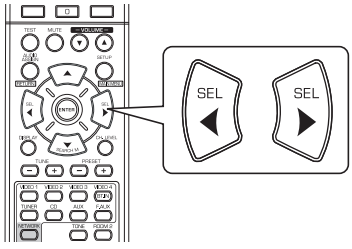
◆ SYSTEM SETUP
- AMP : SURR.BACK / FRONT HEIGHT / ROOM 2 / BI AMP
- SW MODE : NORM / SW +
- TONE : OFF / ON
- RETURN
  - BASS : 0 dB / - 10 ~ + 10
  - TREBLE : 0 dB / - 10 ~ + 10
  - RETURN

- AMP ASSIGN : To assign the power amplifier correctly depending on how to use the speakers.
- SW(SUBWOOFER) MODE : To select the desired subwoofer mode.
- TONE : To adjust the tone (bass and treble) as desired.
- RETURN : To return to the previous menu.

1. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired item.



2. Press the CURSOR LEFT(◀)/RIGHT(▶) buttons to set the selected item as desired



When selecting the AMP ASSIGN

- The SURROUND BACK channels' power amplifier can drive surround back speakers, front height speakers, ROOM 2 speakers or bi-amp capable speakers. Depending on how to use the speakers, you should assign the power amplifier correctly. (For details, refer to "CONNECTING SPEAKERS" on page 9 and "CONNECTING ROOM 2 OUT JACKS OR ROOM 2 SPEAKER TERMINALS" on page 11.)

→SURR .BACK (SURROUND BACK) : To drive the surround back speakers when connecting the SURROUND BACK channels to them.
↕
FRONT HEIGHT : To drive the front height speakers for Dolby Pro Logic IIz playback.
↕
ROOM 2 : To drive the ROOM 2 speakers for ROOM 2 playback.
↕
→BI AMP : To drive the bi-amp capable speakers for bi-amplification.

When selecting the SUBWOOFER MODE

- "SW +" mode is effective only when "FRONT" and "CENTER" are set to "LARGE" and "SUB-W"(Subwoofer) is set to "YES" on the SPEAKER/ROOM EQ SETUP menu. (For details, refer to "SETTING THE SPEAKER/ROOM EQ SETUP" on page 52.)

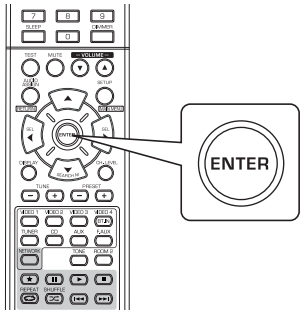
NORM : When the low frequency signals of channels set to "LARGE" are reproduced from those channels only.
In this mode, the low frequency signals that are reproduced from the subwoofer channel is only the low frequency signals of LFE (from the multi-channel sources that contains LFE (Low Frequency Effects) channel, also called the ".1" channel) and the channels set to "SMALL".
↕
SW + : When the low frequency signals of channels set to "LARGE" are reproduced simultaneously from those channels and the subwoofer channel.
In this mode, the low frequency range expands more uniformly through the room, but depending on the size and shape of the room, interference may result in a decrease of the actual volume of the low frequency range.

When selecting the TONE

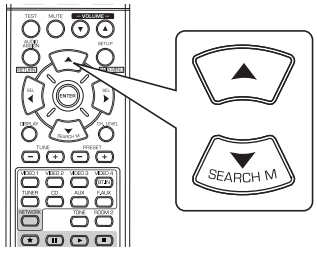
OFF : To listen to a program source without the tone effect. ("DIR" lights up.)
↕
ON : To adjust the tone for your taste. ("DIR" goes off.)

■When the TONE is set to ON to adjust the tone (bass and treble)

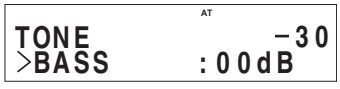
① Press the ENTER button to enter the tone setting mode.



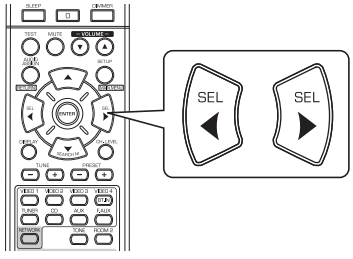
② Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired tone.



When selecting the BASS



③ Press the CURSOR LEFT(◀)/RIGHT(▶) buttons to adjust the selected tone as desired.



- The tone level can be adjusted within the range of -10 ~ +10 dB.
- In general, we recommend the bass and treble to be adjusted to 0 dB (flat level).
- Extreme settings at high volume may damage your speakers.

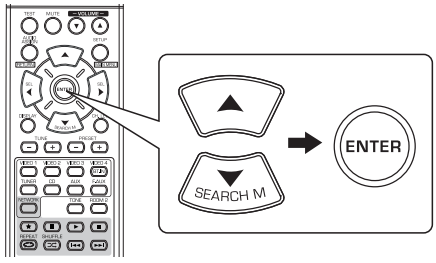
ENGLISH

SETTING THE INPUT SETUP

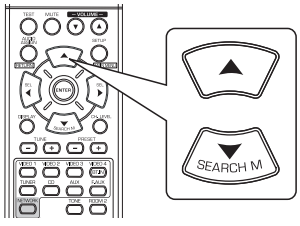
- ◆ INPUT SETUP
  - VIDEO 1 CONFIG
    - A.MODE : AUTO / HDMI / DIGITAL / ANALOG
    - D.IN : OPT1 / OPT 2 / COX 1 / COX 2 / - - -
    - AUTO : ON / OFF
    - SYNC : 0 / 0 ~ 200
    - RETURN
  - V2/iPOD CONFIG
    - A.MODE : AUTO / HDMI / DIGITAL / ANALOG
    - D.IN : OPT1 / OPT 2 / COX 1 / COX 2 / - - -
    - AUTO : ON / OFF
    - SYNC : 0 / 0 ~ 200
    - RETURN
  - VIDEO 3 CONFIG
    - A.MODE : AUTO / HDMI / DIGITAL / ANALOG
    - D.IN : OPT1 / OPT 2 / COX 1 / COX 2 / - - -
    - AUTO : ON / OFF
    - SYNC : 0 / 0 ~ 200
    - RETURN
  - BT CONFIG
    - A.MODE : AUTO / DIGITAL / ANALOG
    - D.IN : OPT1 / OPT 2 / COX 1 / COX 2 / - - -
    - AUTO : ON / OFF
    - RETURN
  - CD CONFIG
    - A.MODE : AUTO / DIGITAL / ANALOG
    - D.IN : OPT1 / OPT 2 / COX 1 / COX 2 / - - -
    - AUTO : ON / OFF
    - RETURN
  - AUX CONFIG
    - A.MODE : AUTO / DIGITAL / ANALOG
    - D.IN : OPT1 / OPT 2 / COX 1 / COX 2 / - - -
    - AUTO : ON / OFF
    - RETURN
  - F.AUX CONFIG
    - A.MODE : AUTO / DIGITAL / ANALOG
    - D.IN : OPT1 / OPT 2 / COX 1 / COX 2 / - - -
    - AUTO : ON / OFF
    - RETURN
  - RETURN

- A.MODE (AUDIO MODE) : To select the audio input signal to be played.
- D.IN(DIGITAL IN) : To assign the connected DIGITAL INs to the desired input.
- AUTO (AUTO SURROUND) : To select the auto surround mode or the manual surround mode.
- SYNC (AV SYNC) To adjust the time delay between the video and audio signals.
- RETURN : To return to the previous menu.

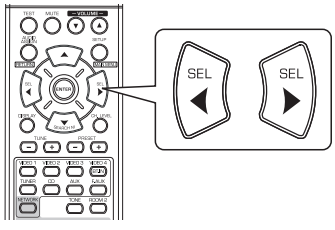
1. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired input source, then press the ENTER button.



2. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired item.



3. Press the CURSOR LEFT(◀)/RIGHT(▶) buttons to set the selected item as desired.



When selecting the AUDIO MODE

• You can select the audio input signal to be played.

■Notes :

• Be sure to set the AUDIO MODE to the audio input which is connected and assigned to the selected input source.
• When the HDMI AUDIO OUT is set to THROUGH, no sound will be heard from the speakers connected to this receiver (except ROOM 2 speakers). (For details, refer to “When selecting the HDMI AUDIO OUT” on page 63.)
• “HDMI” cannot be selected on the “BT CONFIG”, “CD CONFIG”, “AUX CONFIG” and “F.AUX CONFIG” menus.
• When the AUDIO MODE is set to “HDMI”, you should connect the HDMI IN corresponding to the video input source (VIDEO 1, VIDEO 2/iPod, VIDEO 3). If not, the “HDMI1”(, “HDMI2” or “HDMI3”) flickers and no sound will be heard.
• When the AUDIO MODE is set to “DIGITAL”, you should connect the DIGITAL IN and set the DIGITAL IN correctly. If not, the “OPTI.1”(, “OPTI.2”, “COAX.1” or “COAX.2”) flickers and no sound will be heard.

AUTO : When there are multiple audio input signals, the audio input signals are detected and the audio input signal to be played is selected automatically in the priority order of them :
↕ HDMI audio > DIGITAL audio > ANALOG audio
HDMI : The signals that is input into the HDMI IN is always played.
↕
DIGITAL : The signal that is input into the OPTICAL or the COAXIAL DIGITAL IN is always played.
↕
ANALOG : The signal that is input into the analog AUDIO INs is always played.

When selecting the DIGITAL IN

• You should assign the connected DIGITAL IN to the desired input source.
(For details, refer to "CONNECTING DIGITAL INS" on page 8.)
• You can select the desired of OPT 1 (optical 1), OPT 2(optical 2), COX 1(coaxial 1), COX 2(coaxial 2) and - - - (analog).

■Notes :

• In such a case that a DIGITAL IN is assigned to two input sources or more, when these input sources are selected, the digital audio signals can be heard from the same DIGITAL IN.
• When the HDMI IN connector is connected to your video component and the AUDIO MODE is set to “AUTO” or “HDMI”, the DIGITAL IN setting is invalid.

When selecting the AUTO SURROUND

• Depending on how to select a surround mode, you can select the auto surround mode or the manual surround mode.
OFF(Manual surround mode) : You can select the desired of different surround modes selectable for the signal being input with using the SURROUND MODE UP/DOWN (> / <) buttons. (For details, refer to "When selecting the manual surround mode with pressing the AUTO/MANUAL button on the front panel" on page 21.)
↕
ON(Auto surround mode) : The optimum surround mode will be automatically selected depending on the signal format being input.

■Notes :

• Even when the auto surround mode is selected and the same type of digital signal format is being input, the optimum surround mode may vary depending on whether the speaker type is set to "NO" or not.
• When the auto surround mode is selected, the surround modes other than the optimum surround mode cannot be selected.

When selecting the AV SYNC

• There may be a slight time delay between the video and audio signals in case that some video playback equipments may process the video signals later than the audio signals due to signal processing procedure, etc.. Should this happen, you can adjust the time delay of audio signals to synchronize the sound with the picture.
• The time delay can be adjusted within the range of 0 ~ 200 msec.

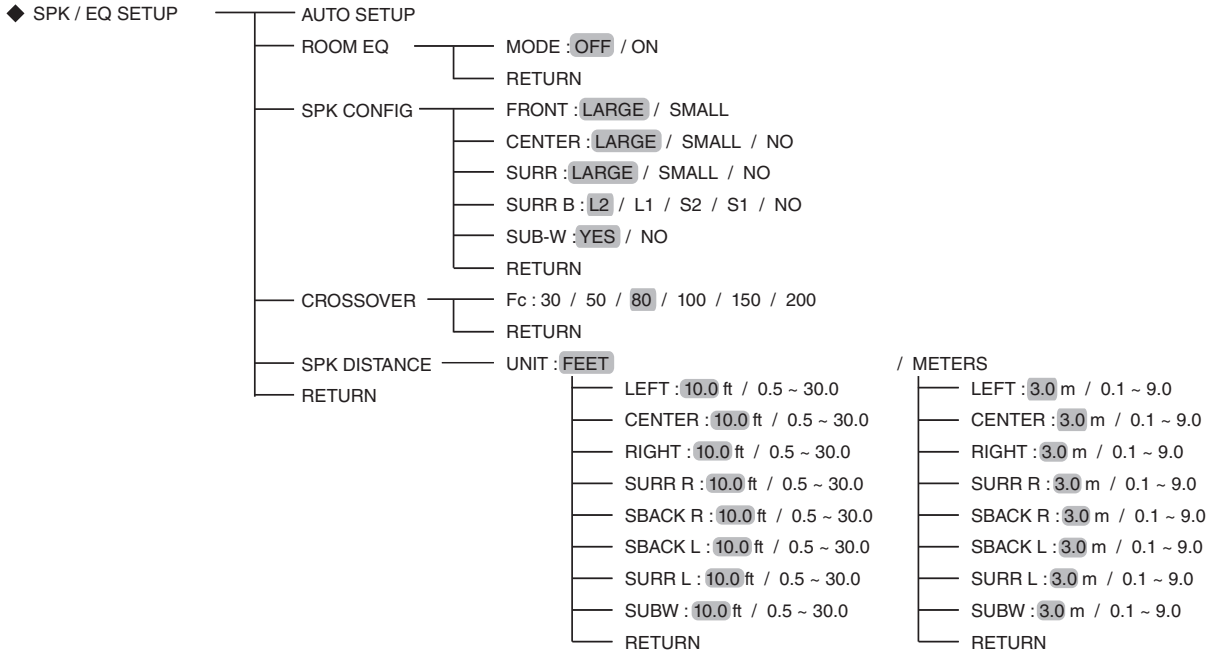
■Note :

• The “SYNC”(AV SYNC) cannot be selected on “BT CONFIG”, “CD CONFIG”, “AUX CONFIG” and “F.AUX CONFIG” menus.

ENGLISH

SETTING THE SPEAKER / ROOM EQ SETUP

- After you have installed this receiver and connected all the components, you should adjust the speaker settings for the optimum sound acoustics according to your environment and speaker layout.
- Even when you change speakers, speaker positions, or the layout of your listening environment, you should adjust the speaker settings, too.
- When performing the AUTO SETUP procedure, you need not perform the SPEAKER CONFIGURATION, SPEAKER DISTANCE and CH LEVEL SETUP procedures.
  However, you should set the CROSSOVER manually when speakers are set to “SMALL”.



- AUTO SETUP : To set the speaker setup and channel level setup automatically.
- ROOM EQ : To turn on or off the room EQ.
- SPK(SPEAKER) CONFIGURATION : To select the sizes of the speakers that are connected.
- CROSSOVER : To select the desired crossover frequency.
- SPK(SPEAKER) DISTANCE: To enter the distance between the listening position and each speaker to set the delay time automatically for optimum surround playback.
- RETURN : To return to the previous menu.

When selecting the AUTO SETUP

- Auto Setup lets you avoid troublesome listening-based speaker setup and achieve good surround sound. Auto Setup has the feature that provides the optimum listening environment at the listening position in your room.
  You should connect the supplied microphone to the SETUP MIC jack so that this receiver can analyze the information from a series of test tones emitted from speakers at main listening position and can adjust the configuration, distance, sound level and frequency response of each speaker automatically.
- If you want to personalize your speaker setup and channel level setup by making the settings manually, perform the "When selecting the SPEAKER CONFIGURATION" on page 55, "When selecting the CROSSOVER" on page 56, "When selecting the SPEAKER DISTANCE" on page 57 and "SETTING THE CH LEVEL SETUP" on page 58.
- After the auto setup has been completed, set the room EQ as desired. (For details, refer to "When selecting the ROOM EQ" on page 54.)

■Preparations

①. Check that the speakers are securely connected to this receiver.
  - If your subwoofer has adjustable volume and crossover frequency, set the volume halfway and set the crossover frequency to the maximum or the low pass filter off.

②. Connect the supplied microphone to the SETUP MIC jack on the front panel.(For details, refer to "SETUP MIC JACK" on page 14.)

■Notes :

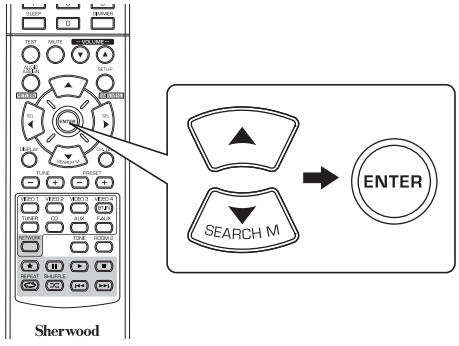
- Because the microphone for Auto Setup is designed for use with this receiver, to use the auto setup function, do not use a microphone other than the one supplied with this receiver.
- After you have completed the auto setup procedure, disconnect the microphone.

Continued

1. Place the microphone on a flat level surface at the listening position.

- If possible, use a tripod, etc. to attach the microphone at the same height as your ears would be when you are seated in your listening position.
- Ensure there are no obstacles between the speakers and the microphone.

2. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the “AUTO SETUP”, then press the ENTER button.



- Loud test tones are output successively and then if a series of auto setup procedure has been completed, the results are memorized and the previous menu is displayed.
- To stop the auto setup procedure while performing it, pess the AUDIO ASSIGN(/RETURN) button or the SETUP (/MAIN MENU) button.
- If there may be a problem with front speakers or microphone connection, error message will be displayed. In this case, turn off the power, check the connection and then retry the auto setup procedure.
- Check the results on each setup menu (SPEAKER CONFIGURATION menu on page 55, SPEAKER DISTANCE menu on page 57 and CH LEVEL SETUP menu for “CAL” mode on page 58).
- If the results are not satisfactory, you can retry the auto setup procedure or personalize your speaker setup and channel level setup by making the settings manually. (For details, refer to "When selecting the SPEAKER CONFIGURATION" on page 55, "When selecting the CROSSOVER" on page 56, "When selecting the SPEAKER DISTANCE" on page 57, "Adjusting each channel level with test tone" on page 23 and "Adjusting the current channel level" on page 24.)

■Notes :

- Because the test tones are loud, ensure there no infants or small children in the room.
- For best results, ensure the room is as quiet as possible during the auto setup procedure. If there is too much ambient noise, the results may not be satisfactory.

ENGLISH

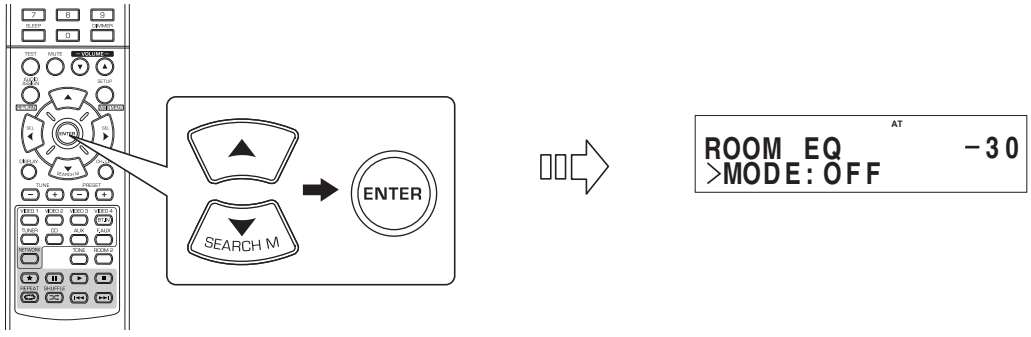
ENGLISH

When selecting the ROOM EQ

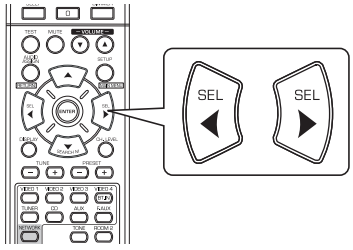
- The room EQ is a kind of room equalizer for your speakers. According to the acoustic characteristics of your room measured by the auto setup, the room EQ automatically adjusts the frequency response of your speakers.
- If you use different brands or sizes of speakers for some channels or have a room with unique acoustic characteristics, such as walls, furniture, and the dimensions or the shape of the room, we recommend using the room EQ.

■Note :
- To use the room EQ, first you should finish measuring the acoustic characteristics of your room performing the auto setup. (For details, refer to "When selecting the AUTO SETUP" on page 52.)

1. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the “ROOM EQ”, then press the ENTER button.



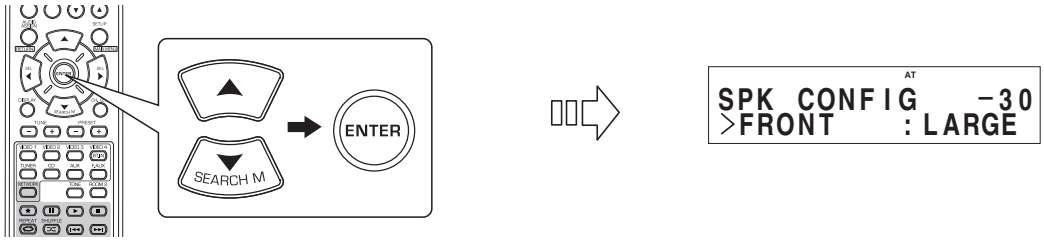
2. Press the CURSOR LEFT(◀)/ RIGHT(▶) buttons to select the desired room EQ mode.



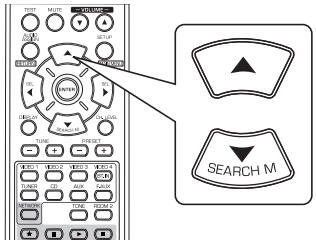
OFF : To turn off the room EQ.
↕
ON : To adjust the frequency response of all speakers to the flattest response.

When selecting the SPEAKER CONFIGURATION

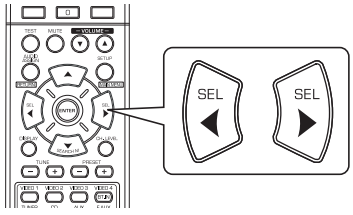
1. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the "SPK CONFIG", then press the ENTER button.



2. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired speaker.



3. Press the CURSOR LEFT(◀)/ RIGHT(▶) buttons to set the selected speaker as desired.



- Depending on your speaker type, you can select one of these following speaker types.
- Front, Center, Surround and Surround Back(or Front Height) speakers :

LARGE(or L) : Select this when connecting speakers that can fully reproduce sounds below crossover frequency.
SMALL(or S) : Select this when connecting speakers that can not fully reproduce sounds below crossover frequency. When this is selected, sounds below crossover frequency are sent to the subwoofer or speakers which are set to "LARGE" (when not using a subwoofer).
NO : Select this when no speakers are connected. When this is selected, sounds are sent to the speakers which are not set to "NO".
( ) : Selectable for Surround Back speakers.

- Surround Back speakers :

2/1 : Select the desired depending on the number of speakers connected to SURROUND BACK terminals.

- Subwoofer :

YES : Select this to output LFE signals and bass frequencies of channels set to “SMALL” form the subwoofer.
NO : Select this when the subwoofer is not connected. The bass frequencies are output from other speakers.

■**Notes** :

- When speakers are set to "SMALL", you should set their crossover frequency correctly according to their frequency characteristics. (For details, refer to "When selecting the CROSSOVER" on page 56.)
- When the "FRONT" is set to "SMALL", “CENTER”, “SURR”(Surround) and "SURR B"(Surround Back) (or “F.HEIGHT”(Front Height)) cannot be set to "LARGE" and the “SUB-W”(Subwoofer) cannot be set to “NO”.
- When the "SURR"(Surround) is set to "SMALL", the "SURR B"(Surround Back) cannot be set to "L"(Large).

4. Repeat the above steps 2 and 3 until the speakers are all set to the desired mode.

■**About the speaker size**

- Select "LARGE" or "SMALL" not according to the actual size of the speaker but according to the speaker's capacity for playing low frequency (bass sound below frequency set on the "CROSSOVER" menu) signals.
- If you do not know, try comparing the sound at both settings (setting the volume to a level low enough so as not to damage the speakers) to determine the proper setting.

ENGLISH

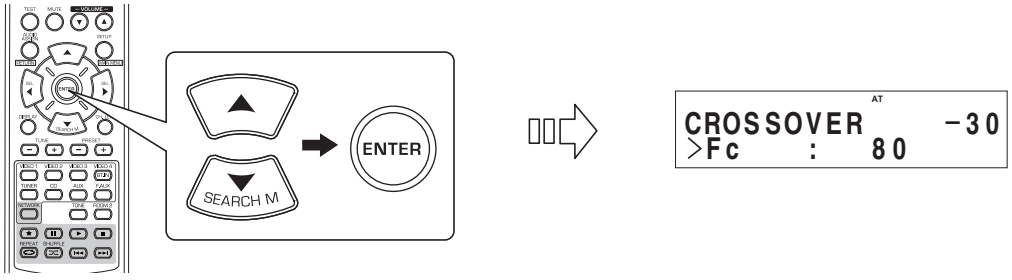
When selecting the CROSSOVER

• When speakers are set to "SMALL", be sure to set their crossover frequency correctly according to their frequency characteristics.

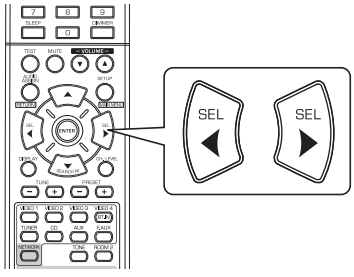
■**Note** :

• Even though performing the AUTO SETUP procedure, you should set the CROSSOVER manually when speakers are set to “SMALL”.

1. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the "CROSSOVER", then press the ENTER button.



2. Press the CURSOR LEFT(◀)/RIGHT(▶) buttons to set the crossover frequency as desired.



• You can select the crossover frequency among 30, 50, 80, 100, 150 and 200 Hz.

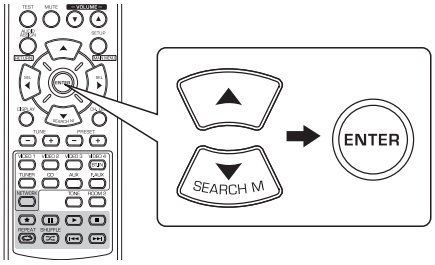
■About the crossover frequency

• When speakers are set to "SMALL", low frequencies in those channels that are below the crossover frequency are to output from subwoofer or front speakers which are set to "LARGE" (when not using a subwoofer).

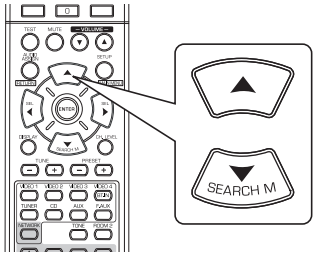
• Refer to the operating instructions of the speakers to be connected. If the frequency range of your speaker is 100 Hz~20 kHz, the crossover frequency should be set to 100 Hz(or slightly higher).

When selecting the SPEAKER DISTANCE

1. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the “SPK DISTANCE”, then press the ENTER button.

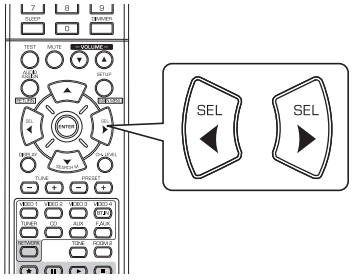


2. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired item.



■Note :
- You cannot select the speakers set to "NO".

3. Press the CURSOR LEFT(◀)/RIGHT(▶) buttons to set the selected item as desired.



■When selecting the desired unit
- You can select either "FEET" or "METERS".
- Once a unit is selected, the distances are automatically changed in the selected unit.

■When setting the distance
- You can set the distance within the range of 0.5 ~ 30.0 feet in 0.5 feet intervals (or 0.1 ~ 9.0 meters in 0.1 meter intervals).

4. Repeat the above steps 2 and 3 until the distances are all set as desired.

■About the speaker distance

When enjoying multi-channel surround playback with Dolby Digital and DTS sources, etc., it is ideal that the center, surround and surround back speakers, etc. should be the same distance from the main listening position as the front speakers. By entering the distance between the listening position and each speaker, the delay times of center, surround and surround back speakers, etc. are automatically adjusted to create an ideal listening environment virtually as if the center, surround and surround back speakers, etc. were at their ideal locations respectively.

SETTING THE CH LEVEL SETUP

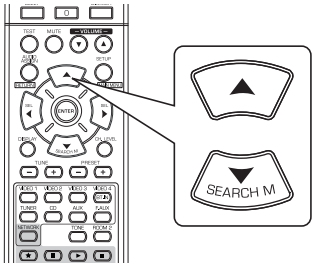
- ◆ CH LVL SETUP
  - MODE : CAL / REF 1 / REF 2
  - LEFT : 0 dB / -15 ~ + 15
  - CENTER : 0 dB / -15 ~ + 15
  - RIGHT : 0 dB / -15 ~ + 15
  - SURR R: 0 dB / -15 ~ + 15
  - SBACK R : 0 dB / -15 ~ + 15
  - SBACK L : 0 dB / -15 ~ + 15
  - SURR L : 0 dB / -15 ~ + 15
  - SUBW : 0 dB / -15 ~ + 15
  - DD : 0 dB / -10 ~ 0
  - DTS : 0 dB / -10 ~ 0
  - RETURN

■**Note :** Depending on the speaker settings ("NO", etc), some channels cannot be selected.

Adjusting the current channel level

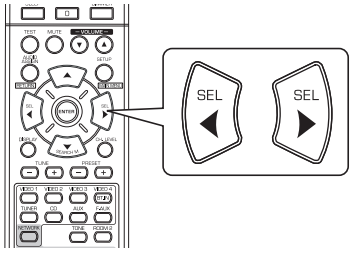
- You can adjust the current channel levels as desired. These adjusted levels are just memorized into user's memory("CAL"), not into preset memory ("REF 1", "REF 2")
- After adjusting each channel level with test tone, adjust the channel levels either according to the program sources or to suit your tastes. (For details, refer to "Adjusting each channel level with test tone" on page 23.)

1. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired channel.



Example: When selecting Dolby Digital source's LFE

2. Press the CURSOR LEFT(◀)/RIGHT(▶) buttons to adjust the level of the selected channel or program source's LFE as desired.



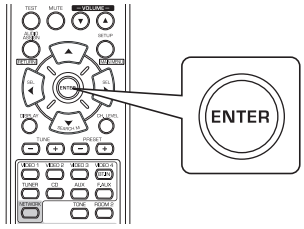
- The LFE level can be adjusted within the range of -10 ~ 0 dB and other channel levels within the range of -15 ~ +15 dB
- In general, we recommend the LFE level to be adjusted to 0 dB.(However, the recommended LFE level for some early DTS software is -10 dB.) If the recommended levels seem too high, lower setting as necessary.

3. Repeat the above steps 1 and 2 to adjust each channel level.

Memorizing the adjusted channel levels

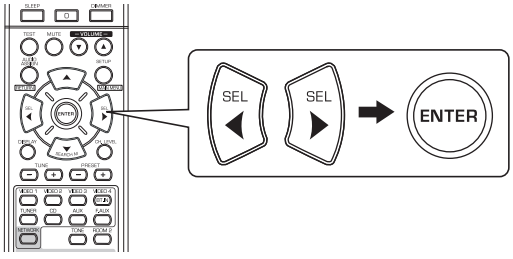
• You can memorize the adjusted channel levels into preset memory("REF 1", "REF 2") and recall the memorized whenever you want.

1. After performing the steps 1 ~ 3 in "Adjusting the current channel level" procedure on page 58, press the ENTER button.



• Then "1" of "REF 1" indication flickers.

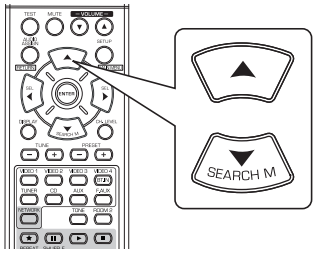
2. Press the CURSOR LEFT(◀)/RIGHT(▶) buttons to select the desired preset memory, then press the ENTER button.



• Each time the CURSOR LEFT(◀) or RIGHT(▶) button is pressed, "REF 1" or "REF 2" is selected.
• The adjusted channel levels have now been memorized into the selected memory.

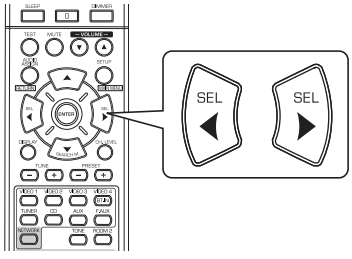
Recalling the memorized channel levels

1. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the "MODE ~ ".



• "CAL" may be displayed instead of "REF 1" or "REF 2".

2. Press the CURSOR LEFT(◀)/RIGHT(▶) buttons to select the desired one of REF 1 and REF 2.



• Then the channel levels memorized into the selected preset memory are recalled.

SETTING THE MULTI ROOM SETUP

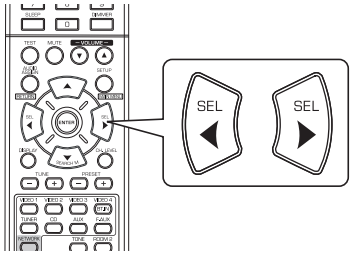
• The ROOM 2 function allows enjoying one source in the main room and playing another in a different room at the same time.

◆ MULTI ROOM SET
- ROOM 2 : OFF / ON
- RETURN
  - IN : MAIN / TUNER / CD / AUX / F.AUX / VIDEO 1 / V2/iPOD / VIDEO 3 / BT
  - VOL : 30 / MIN(0) ~ MAX(80)
  - RETURN

• ROOM 2(ROOM 2 MODE) : To turn on or off the ROOM 2 function.
• IN(ROOM 2 INPUT) : To select the desired ROOM 2 source.
• VOL(ROOM 2 VOLUME) To adjust the volume on the power amplifier assigned to “ROOM 2”.
• RETURN : To return to the previous menu.

■Notes:
• When the speakers are connected to the ROOM 2 speaker terminals, be sure to set the “AMP” to “ROOM 2”. (For details, refer to “When selecting the AMP ASSIGN” on page 48.)
• Only the analog input signal from the ROOM 2 source can be heard. So, be sure to make analog audio connection (and select analog input for ROOM 2 source if needed).

1. Press the CURSOR LEFT(◀)/RIGHT(▶) buttons to set the ROOM 2 MODE as desired.

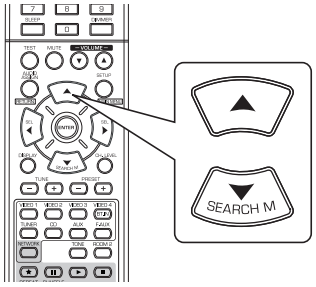


ON : To turn on the ROOM 2 function.(“R2” lights up)
↕
OFF : To turn it off.(“R2” goes off)

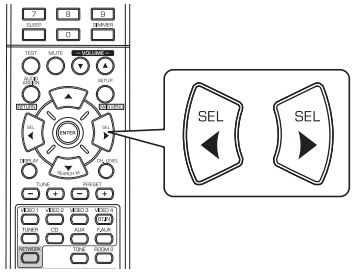
■Notes:
• When the ROOM 2 mode is set to OFF, you cannot select the ROOM 2 INPUT and the ROOM 2 VOLUME.
• Even when this receiver enters the standby mode, in such a case that “R2” lights up still, meaning only the ROOM 2 circuitry operates, the ROOM 2 source can be played independently.
• When you do not use the ROOM 2 function, turn off the ROOM 2 function to save electricity.

■When the ROOM 2 MODE is set to ON.

2. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired item.



3. Press the CURSOR LEFT(◀)/RIGHT(▶) buttons to set the selected item as desired.



■When selecting the ROOM 2 INPUT
• You can select the desired among MAIN source, TUNER, CD, AUX, F.AUX, VIDEO 1, V2/iPOD, VIDEO 3 and BT.

■When selecting the ROOM 2 VOLUME
• You can adjust the volume on the power amplifier assigned to “ROOM 2” when the ROOM 2 speaker terminals are connected to the speakers in a different room.

SETTING THE PARAMETER SETUP

◆ PARAMTER SETUP
- PANORAMA : OFF / ON
- C.WIDTH : 3 / 0 ~ 7
- DIMENSION : 0 / -3 ~ +3
- DRC DD
  - DRC : OFF / MID / MAX
  - RETURN
- DRC THD
  - DRC : AUTO / OFF / MID / MAX
  - RETURN
- H.GAIN : LOW / MID / HIGH
- RETURN

• DOLBY PRO LOGIC II MUSIC PARAMETERS (PANORAMA, C.WIDTH(CENTER WIDTH), DIMENSION) : To adjust the various Dolby Pro Logic II/Dolby Pro Logic IIx Music parameters for optimum surround effect.

• DRC DD/THD(DYNAMIC RANGE COMPRESSION DOLBY DIGITAL/DOLBY TRUEHD) : To adjust the dynamic range compression that makes faint sound easier to hear at low volume levels.

• H.GAIN(HEIGHT GAIN) : To adjust the front height channel level.

• RETURN : To return to the previous menu.

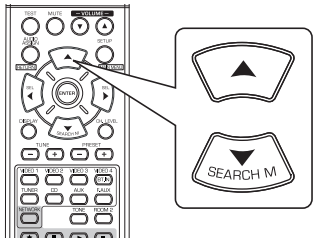
When selecting “PANORAMA”, “C.WIDTH”, “DIMENSION”

• You can adjust the various Dolby Pro Logic II/Dolby Pro Logic IIx Music parameters for optimum surround effect.

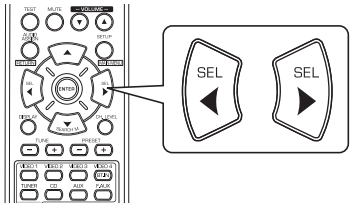
■Note:

• The parameter settings are valid only when listening in Dolby Pro Logic II/Dolby Pro Logic IIx Music mode.

1. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired parameter.



2. Press the CURSOR LEFT(◀)/ RIGHT(▶) buttons to adjust the selected parameter as desired.



■When selecting the "PANORAMA" mode

This mode extends the front stereo image to include the surround speakers for an exciting "wraparound" effect with side wall imaging. Select "OFF" or "ON"(default value:OFF).

■When selecting the "C. WIDTH"(CENTER WIDTH) control

This adjusts the center image so it may be heard only from the center speaker, only from the left/right speakers as a phantom image, or from all three front speakers to varying degrees. The control can be set in 8 steps from 0 to 7 (default value : 3).

■When selecting the "DIMENSION" control

This gradually adjusts the soundfield either towards the front or towards the rear. The control can be set in 7 steps from -3 to +3 (default value : 0).

3. Repeat the above steps 1 and 2 to adjust other parameters.

ENGLISH

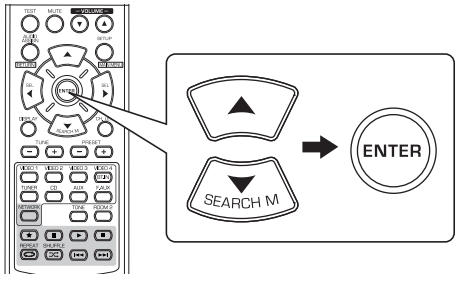
When selecting “DRC DD”, “DRC THD”

- This function compresses the dynamic range of previously specified parts of the Dolby Digital or Dolby TrueHD sound track (with extremely high volume) to minimize the difference in volume between the specified and non-specified parts.
  This makes it easy to hear all of the sound track when watching movies at night at low levels.

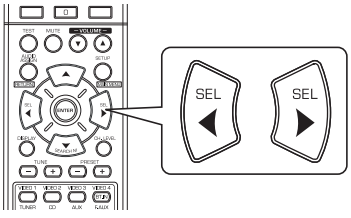
■Notes:

- These settings are valid only when the digital signals from the Dolby Digital or Dolby TrueHD program source are being input.
- In some Dolby Digital softwares, these settings may not be valid.

1. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired “DRC” mode, then press the ENTER button.



2. Press the CURSOR LEFT(◀)/ RIGHT(▶) buttons to adjust the dynamic range compression as desired.



■When selecting the "DRC DD"(DYNAMIC RANGE COMPRESSION DOLBY DIGITAL)

OFF : To turn off the DRC function
↕
MID
↕ Higher compression
MAX

■When selecting the "DRC THD"(DYNAMIC RANGE COMPRESSION DOLBY TRUEHD)

AUTO : To adjust the dynamic range compression
↕ automatically.
OFF : To turn off the DRC function
↕
MID
↕ Higher compression
MAX

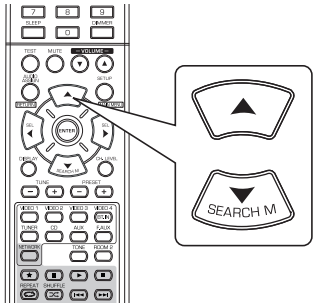
When selecting “H.GAIN”

- You can adjust the front height channel level as desired.

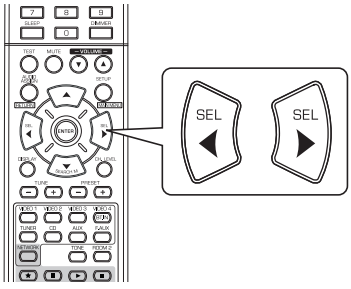
■Note:

- This setting is valid only when listening in Dolby Pro Logic IIz mode.

1. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the “H.GAIN”.



2. Press the CURSOR LEFT(◀)/ RIGHT(▶) buttons to adjust the front height channel level as desired.



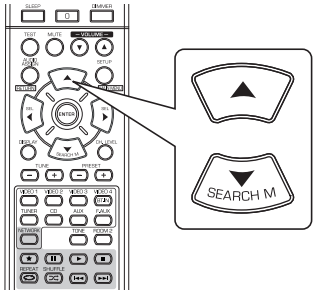
LOW : To decrease the front height channel level.
↕
MID : To output the front height channel sound with
↕ standard sound volume level.
HIGH : To increase the front height channel level.

SETTING THE HDMI SETUP

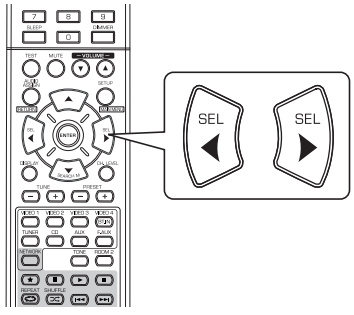
◆ HDMI SETUP
- HDMI : AMP / THROUGH
- CEC : OFF / ON
- POWER : OFF / ON
- RETURN

• HDMI(HDMI AUDIO OUT) : To output the digital audio signals from the HDMI MONITOR OUT connector.
• CEC(HDMI CONTROL) : To link operations with components connected to HDMI connectors and compatible with HDMI control.
• POWER(POWER CONTROL) : To link the power ON/OFF status of this unit to components.
• RETURN : To return to the previous menu.

1. Press the CURSOR UP(▲)/DOWN(▼) buttons to select the desired item.



2. Press the CURSOR LEFT(◀)/RIGHT(▶) buttons to set the selected item as desired.



When selecting the HDMI AUDIO OUT

• The HDMI connection can carry uncompressed digital video signals and digital audio signals.
• Depending on whether the digital audio signals input into the HDMI IN are output from the HDMI MONITOR OUT of this receiver or not, you should set the HDMI AUDIO OUT correctly.
AMP : Not to output the HDMI digital audio signals from the HDMI MONITOR OUT of this receiver, meaning these signals are heard from the speakers connected to this receiver.
↕
THROUGH : To output the HDMI digital audio signals from the HDMI MONITOR OUT, meaning these signals are heard from the speakers of your TV.

■Note:
• When the HDMI AUDIO OUT is set to THROUGH, no sound will not be heard from the speakers connected to this unit(except ROOM 2 speakers).

When selecting the HDMI CONTROL

• The HDMI control function allows input selection of this unit to be interlocked with the operation of the connected components.
OFF : Not to use the HDMI CONTROL function.
↕
ON : To use the HDMI CONTROL function.
• When the HDMI CONTROL is set to ON, you can also use the ARC(Audio Return Channel) function, enabling the TV to send the audio signals to this receiver via a HDMI cable.

■Notes:
• The HDMI control function may not work depending on the connected component and its settings.
• To use the ARC function, the TV that supports the ARC function of the HDMI 1.4 standards is required.
• For details on HDMI CONTROL and POWER CONTROL, refer to “CONFIRMING THE HDMI FUNCTION” on page 45.

ENGLISH

When selecting the POWER CONTROL

• The power control function allows the power status of this unit to be interlocked with the power ON/OFF and start of playback of the connected components.
OFF : Not to use the POWER CONTROL function.
↕
ON : To use the POWER CONTROL function.

■**Note:**
• The POWER CONTROL can be set only when the HDMI CONTROL is set to ON.

Troubleshooting Guide

If a fault occurs, run through the table below before taking your receiver for repair.
If the fault persists, attempt to solve it by switching the receiver off and on again. If this fails to resolve the situation, consult your dealer. Under no circumstances should you attempt to repair the receiver yourself. This could void the warranty.

PROBLEM	POSSIBLE CAUSE	REMEDY
No power	• The AC input cord is disconnected. • Poor connection at AC wall outlet or the outlet is dead or off.	• Connect cord securely. • Check the outlet using a lamp or another appliance.
No sound	• The speaker wires are disconnected. • The master volume is adjusted too low. • The MUTE button is pressed to ON. • Incorrect selection of input source. • Incorrect connections between the components. • The HDMI AUDIO OUT is set to THROUGH. • The settings related to audio are set incorrectly.	• Check the speaker connections. • Adjust the master volume. • Press the MUTE button to cancel the muting effect. • Select the desired input source correctly. • Make connections correctly. • Set it to AMP. (For details, refer to "When selecting the HDMI AUDIO OUT" on page 63.) • Set the settings correctly. (For details, refer to "SETTING THE INPUT SETUP" on page 50.)
No sound from the surround speakers	• Surround mode is switched off(stereo mode). • Master volume and surround level are too low. • Monaural source is used. • Surround speaker setting is "NO".	• Select a surround mode. • Adjust master volume and surround level. • Select a stereo or surround source. • Select the desired surround speaker setting.
No sound from the center speaker	• Stereo mode, etc is selected. • Center speaker setting is "NO". • Master volume and center level are too low.	• Select the desired surround mode. • Select the desired center speaker setting. • Adjust master volume and center level.
No sound from the surround back (or front height) speakers	• The input signal format or the current surround mode cannot support the 7.1(or 6.1) surround. • The surround back channels' power amplifier is assigned to "BIAMP" or "ROOM 2". • Master volume and surround back (or front height) level are too low. • Surround back(or front height) speaker setting is "NO".	• Under the proper situations, perform the 7.1(or 6.1) surround playback.(For details, refer to "ENJOYING SURROUND SOUND" on page 21.) • Assign the power amplifier to the surround back (or front height) channels.(For details, refer to "When selecting the AMP ASSIGN"on page 48.) • Adjust master volume and surround back (or front height) level. • Select the desired surround back (or front height) speaker setting.
No picture	• Video connections between this unit and the monitor TV are not made correctly. • Incorrect selection of input source on the monitor TV. • The settings related to video are set incorrectly.	• Make proper video connections. • Select the input source correctly. • Set the settings correctly. (For details, refer to "SETTING THE INPUT SETUP" on page 50.)
No picture with an HDMI connection	• HDMI connection between this unit and the monitor TV are not made correctly. • The monitor TV or other equipments do not support HDCP.	• Make proper HDMI connection. • This unit will not output video signal unless the connected equipments supports HDCP.
Noise or distorted picture	• Video format of your monitor TV, DVD player, etc. is different from NTSC.	• Change the video format to NTSC.
Stations cannot be received	• No antenna is connected. • The desired station frequency is not tuned in. • Antenna is in wrong position.	• Connect an antenna. • Tune in the desired station frequency. • Move antenna and retry tuning.
Preset stations cannot be received	• An incorrect station frequency has been memorized. • The memorized stations are cleared.	• Memorize the correct station frequency. • Memorize the stations again.
Poor FM reception	• No antenna is connected. • The antenna is not positioned for the best reception. • Weak signals.	• Connect an antenna. • Change the position of the antenna. • Install an outdoor FM antenna.
Continuous or intermittent hissing noise during AM reception, especially at night.	• Noise is caused by motors, fluorescent lamps or lightning, etc.	• Keep the receiver away from noise sources. • Install an outdoor AM antenna.
Cannot connect to network.	• Network down. • Insufficient signal strength.	• Check that network is working. • Shorten the distance from the wireless LAN's access point or remote any obstacles.
Internet radio broadcast cannot be played.	• Network is disconnected. • Program is broadcasting in non-compatible format. • Internet radio station is not currently broadcasting.	• Check the connection status. • Only internet radio programs in MP3 and WMA formats can be played in this unit. • Tune in a radio station that is currently broadcasting.
Remote control unit does not operate.	• Batteries are not loaded or exhausted. • The remote sensor is obstructed.	• Replace the batteries. • Remove the obstacle.

Specifications

ENGLISH

■AMPLIFIER SECTION
- Power output, stereo mode, 6 Ω, THD 0.1 %, 40 Hz~20 kHz | **2× 80 W**
- Total harmonic distortion at -3 dB, 6 Ω, 1 kHz | **0.02%**
- Intermodulation distortion
  60 Hz : 7 kHz= 4 : 1 SMPTE, 6 Ω, 80 W | **0.05%**
- Input sensitivity/impedance
  Line (CD, AUX, VIDEO) | **250 mV/47kΩ**
- Signal to noise ratio, IHF "A" weighted
  Line (CD, AUX, VIDEO) | **95 dB**
- Frequency response
  Line (CD, AUX, VIDEO), 10 Hz ~ 90 kHz | **+0, -3 dB**
- Output level
  ROOM 2 OUT, 2.2 kΩ | **250 mV**
- Bass/Treble control, 100 Hz/10 kHz | **±10 dB**
- Surround mode, only channel driven
  Front power output, 6 Ω, 1 kHz, THD 1.0 % | **80 W / 80 W**
  Center power output, 6 Ω, 1 kHz, THD 1.0 % | **80 W**
  Surround power output, 6 Ω, 1 kHz, THD 1.0 % | **80 W / 80 W**
  Surround back /Front height / ROOM 2 power output, 6 Ω, 1 kHz, THD 1.0 % | **80 W / 80 W**

■DIGITAL AUDIO SECTION
- Sampling frequency | **32, 44.1, 48, 96, 192 kHz**
- Digital input level
  Coaxial, 75 Ω | **0.5 Vp-p**
  Optical, 660 nm | **-15 ~ -21 dBm**

■VIDEO SECTION
- Video format | **NTSC**
- Input sensitivity(=Output level), 75 Ω
  Video (Composite(normal)) | **1 Vp-p**
- HDMI connector | **19 pin**

■FM TUNER SECTION
- Tuning frequency range | **87.5~108 MHz**
- Usable sensitivity, S/N 30 dB | **- 4 dBu**
- Signal to noise ratio, mono/stereo | **70 / 60 dB**
- Total harmonic distortion, 1 kHz, mono/stereo | **0.05 / 1.4 %**
- Frequency response, 17 Hz~12 kHz | **±3 dB**
- Stereo separation, 1 kHz | **40 dB**
- IF rejection ratio | **130 dB**

■AM TUNER SECTION
- Tuning frequency range | **520~1710 kHz**
- Usable sensitivity, S/N = 20 dB | **54 dBu/m**
- Signal to noise ratio | **40 dB**
- Selectivity | **50 dB**

■WIRELESS LAN SECTION
- Network type (wireless LAN standards) | **Confirming to IEEE 802.11 b/g/n**

- Used frequency range | **2.412 ~ 2.472 MHz**

■GENERAL
- Power supply | **120 V ~ 60 Hz**
- Power consumption | **2.5 A**
- Dimensions (WxHxD, including protruding parts) | **435x143x371 mm**(**17-3/8x5-5/8x14-5/8 inches**)
- Weight (Net) | **9.1 kg (20.1 lbs)**

Note: Design and specifications are subject to change without notice for improvements.

705i(A) cover_cover.qxp 2010-11-08 오후 4:31 페이지 2

RD-705i

NETWORK AV RECEIVER

Sherwood

5707-00000-480-0S